

HANDBOOK OF GLOBAL ENVIRONMENTAL POLITICS,
SECOND EDITION

Handbook of Global Environmental Politics, Second Edition

Edited by

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Acronyms

AOSIS	Alliance of Small Island States
ATCP	Antarctic Treaty Consultative Party
BASIC	Brazil, South Africa, India and China
BAU	business as usual
BTA	bilateral trade agreement
CAFTA	Central America Free Trade Agreement
CAS	Country Assistance Strategy
CBD	Convention on Biological Diversity
CCA	climate change adaptation
CCAMLR	Convention on the Conservation of Antarctic Marine Living Resources
CCI	Clinton Climate Initiative
CCSBT	Commission for the Conservation of Southern Bluefin Tuna
CDM	Clean Development Mechanism
CDP	Carbon Disclosure Project
CDR	carbon dioxide removal
CFC	chlorofluorocarbon
CITES	Convention on International Trade in Endangered Species
CLRTAP	Convention on Long-Range Transboundary Air Pollution
CoC	code of conduct
CoP	Conference of the Parties
CPR	common-pool resource
CSD	Commission on Sustainable Development
CSR	corporate social responsibility
DRC	Democratic Republic of Congo
DSB	dispute settlement body
ECOSOC	Economic and Social Council (UN)
ED	executive director
EEA	European Environment Agency
EEZ	exclusive economic zone
EMG	Environmental Management Group
ENGO	environmental nongovernmental organization
ENMOD	Environmental Modification Techniques
EO	executive order
EPA	Environmental Protection Agency
ET	Emissions Trading
ETS	emissions trading scheme
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FCCC	Framework Convention on Climate Change
FDI	foreign direct investment

FOC	flag of convenience
FSC	Forest Stewardship Council
FTA	free trade agreement
G7/8/20/77	Group of 7/8/20/77
GAP	Goals, Arguments, and Patterns
GATT	General Agreement on Tariffs and Trade
GC	Governing Council
GCC	Global Climate Coalition
GEF	Global Environment Facility
GEG	global environmental governance
GEO	Global Environment Outlook
GEP	global environmental politics
GG	global governance
GHG	greenhouse gas
GIN	Global Integrated Network
GM	genetically modified
GMEF	Global Ministerial Environment Forum
GMO	genetically modified organism
GPE	global political economy
GRI	Global Reporting Initiative
GSO	geostationary satellite orbit
GTP	Global Temperature change Potential
GWP	Global Warming Potential
HCFC	hydrochlorofluorocarbon
IBRD	International Bank for Reconstruction and Development
ICAO	International Civil Aviation Organization
ICCAT	International Commission for the Conservation of Atlantic Tunas
ICRG	International Country Risk Guide
ICSID	International Center for the Settlement of Disputes
IDA	International Development Association
IEG	international environmental governance
IFC	International Finance Corporation
IFI	international financial institution
IFRC	International Federation of the Red Cross and Red Crescent Societies
ILO	International Labour Organization
IMF	International Monetary Fund
IO	international organization
IOTC	Indian Ocean Tuna Commission
IPCC	Intergovernmental Panel on Climate Change
IPE	international political economy
IR	international relations
ISO	International Organization for Standardization
ITF	International Transport Workers Federation
ITU	International Telecommunication Union
IUCN	International Union for the Conservation of Nature
IWRM	integrated water resources management

JI	Joint Implementation
MDB	multilateral development bank
MEA	multilateral environmental agreement
MENA	Middle East and North Africa region
MIGA	Multilateral Investment Guarantee Agency
MNC	multinational corporation
MoP	Meeting of the Parties
MSC	Marine Stewardship Council
NAFTA	North American Free Trade Agreement
NASA	National Aeronautics and Space Administration
NEAP	National Environmental Action Plan
NEPA	National Environmental Policy Act
NEPI	new environmental policy instrument
NFR	non-financial reporting
NGO	nongovernmental organization
NRM	natural resource management
NSMD	non-state market-driven governance
ODA	official development assistance
ODS	ozone-depleting substances
OECD	Organization for Economic Cooperation and Development
OED	Operations Evaluation Department
OHCHR	Office of the High Commissioner for Human Rights
P-A	principal-agent
PIC	prior informed consent
POPs	persistent organic pollutants
PSC	port state control
RTA	regional trade agreement
RUF	Revolutionary United Front
SAICM	Strategic Approach to International Chemicals Management
SRM	solar radiation management
TEAN	transnational environmental advocacy network
TNC	transnational corporation
TPA	Trade Promotion Agreement
TWAIL	Third World Approaches to International Law
UDHR	Universal Declaration on Human Rights
UNCED	United Nations Conference on Environment and Development
UNCESCR	United Nations Committee on Economic, Social and Cultural Rights
UNCHE	United Nations Conference on the Human Environment
UNCHR	United Nations Commission on Human Rights
UNCLOS	United Nations Convention on the Law of the Sea
UNDP	United Nations Development Programme
UNEO	United Nations Environment Organization
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNHRC	United Nations Human Rights Council

UNIDO	United Nations Organization for Industrial Development
WB	World Bank
WBG	World Bank Group
WBGU	German Government Advisory Council on Global Change
WCSD	World Commission on Sustainable Development
WCDE	World Commission on Environment and Development
WEO	World Environmental Organization
WHO	World Health Organization
WMO	World Meteorological Organization
WSSD	World Summit on Sustainable Development
WTO	World Trade Organization

PART I

INTRODUCTION

1 Research trends in global environmental politics

*Peter Dauvergne*¹

The second edition of the *Handbook of Global Environmental Politics* brings together more than 40 of the world's leading scholars of global environmental politics. Much of the foundational literature in this field is only a few decades old. The core debates are therefore still dynamic and energetic, if anything, becoming more so since the publication of the first edition of the handbook in 2005. The intellectual arguments remain dynamic and vigorous, but almost never acrimonious, and scholars of global environmental politics are remarkably tolerant (even of a demanding editor). Perhaps the shared concern for the health of the planet diffuses the desire for petty squabbles within some fields. Or perhaps it feels pointless to feud with others after the daily toil of thinking and teaching about looming doom and catastrophe. Whatever the reason, the collegiality of this field made my task as editor seem, well, not a task at all, but rather an honor and a break from my more normal duties.

The book is split into four main parts: states and cooperation (Part II); global governance (Part III); the political economy of governance Part IV); and knowledge and ethics (Part V). This introductory chapter draws on the research in this book to examine the intellectual trends and evolving parameters of the field of global environmental politics. It makes a case for an expansive definition of the field, one that embraces an interdisciplinary literature on the connections between global politics and environmental change with a focus on thematic topics such as states, regimes, sovereignty, institutions, capitalism, trade, corporations, financing, security, ethics, norms, civil societies, and private global governance. It points to several notable trends, including a deepening of the analysis of some themes such as global governance and climate change, a shift away from some themes such as trying to map the causal links between environmental change and violent conflict, and a move toward themes such as the private governance, global political economy, and ethics.

To set the stage for the 39 chapters of the second edition of the *Handbook of Global Environmental Politics*, this chapter draws on the analysis in each to introduce the history and map the latest research trends in the field of global environmental politics – what many now simply call “GEP.”²

The Field

What is GEP? What are the core research questions and findings in this field of inquiry? Where do the disciplinary boundaries begin and end? There are no precise answers to these questions. The field of GEP began to emerge in the late 1960s and early 1970s. Today, it is no doubt partly grounded in the discipline of political science – in an analysis of the role of states, global institutions, the global political economy, global power, norms and ideology, as well as in theories of international relations (IR). Yet the very nature of almost every question on global ecological change means that the research crosses disciplinary boundaries. It means, too, that

¹ I am indebted to Sharon Goad for her assistance with preparing this book for publication.

² Note, “chapters” (for example, Dauvergne ch. 1) in this text refers to the ones in this book.

some of the most innovative research is occurring outside of political science – in disciplines such as geography, environmental studies, economics, sociology, law, history, philosophy, development studies, biology, and human ecology. There is naturally considerable dispute about where the field begins and ends. The quick growth in the volume of GEP research over the last decade-and-a-half has further blurred the parameters of this field.

Some see the core of the field in the literature on states and transnational governance. Some see it embedded in IR theories of environmental regimes.³ Others see the core in the literature on the ecological impact of the global political economy – in the politics of growth, trade, corporations, financing, and consumption. Still others see the field as spanning far more, embracing the literature on states and the global political economy, but also the literature on environmental security, ethics, civil societies, and private global governance. Such a broad definition of the parameters of global environmental politics undeniably suffers from many of the same shortcomings as with all interdisciplinary efforts – in particular, the sheer volume and scope of research puts great demands on the time and intellectual flexibility of analysts. It is tempting at times to confine the field – to just read political scientists or define the scope of global environmental politics narrowly. Indeed, no single researcher can possibly keep up with all of the breakthroughs in environmental and social sciences. Yet, in my view, the greatest strength of this field, and its greatest contribution to the pursuit of intellectual discovery, is the interdisciplinary range of the research.

This chapter is not the first effort to map the field of global environmental politics. Others, including Michael Zürn, Ronald Mitchell, and Matthew Paterson, provide alternative reviews.⁴ Stepping back to examine these past surveys is useful for understanding the trajectory of more recent GEP research. Zürn focuses on the analysis of international environmental regimes, institutions, and transnational networks, especially the contributions of international environmental politics to regime theory in international relations. He sees two generations of research – one in the 1980s that brought international environmental policy into the study of global politics, with links to security, economics, foreign policies, and international institutions. He sees a second generation in the 1990s – more confident, with more precise questions and methodologies (generally qualitative designs with a low number of cases), especially for the study of global institutions and regimes. This second generation also brought in the role of transnational movements as well as science and knowledge (including, importantly, the work of Peter Haas on epistemic communities).⁵ Zürn predicted a third generation of international environmental research – one that would focus more on large-scale quantitative and qualitative studies that methodically test theories and hypotheses.

Much of the second generation of research in international environmental politics, Zürn correctly notes, assumes “a postrealist consensus which holds that international institutions do matter, world politics is much more than intergovernmental politics and includes a wider range of actors than states, and world politics is not only about power and material interests but is also about nonmaterial interests, ideas, knowledge, and discourses.” In his review of this literature Zürn concentrates on the stages of regime development – from agenda setting to formation to implementation – and argues that two of the most promising literatures are on the

³ Steven Krasner’s (1983, 2) definition of international regime remains the classic one for many IR scholars: “sets of implicit or explicit principles, norms, rules and decision-making procedures around which actors’ expectations converge in a given area of international relations.”

⁴ Zürn 1998; Mitchell 2002a; and Paterson 2006.

⁵ Haas 1992.

effects of regimes and on the role of knowledge-based transnational networks. For him, one result of this second generation of research is:

It is no exaggeration to state that the developments leading to the ozone regime, to the regime for long-range transboundary air pollution in Europe, and to the regime on the politics of global climate change are three of the most carefully analyzed issues in contemporary international politics.⁶

Like Zürn, Mitchell focuses on the IR literature on regimes and institutions.⁷ Mitchell adds more depth, however, on the causal explanations of the stages of the international environmental policy process (in part because he is focusing on the literature on international environmental politics and policy). For him, the core questions driving research in international environmental politics and policy include: what are the causes of global ecological problems? Why do some issues reach the global agenda? Why does the global community develop international agreements for some issues and not for others? Why are some international policies effective while others fail? What factors strengthen or weaken agreements over time? How does global environmental management improve? Mitchell's review, like Zürn's, calls for more methodological rigor among scholars of international environmental regimes and institutions. "Methodologically," Mitchell writes, "we need to supplement the almost-exclusive use of case studies with quantitative methods, formal modeling and simulation. ... Empirically, we need to supplement the almost-exclusive use of case studies with quantitative methods, formal modeling and simulation."⁸

Like Mitchell and Zürn, Paterson concentrates on the IR literature, focusing on theories within the field of international environmental politics.⁹ Rather than simply categorizing and describing the arguments in the field, he strives to uncover the underlying assumptions – both normative and methodological – of the various approaches to studying international environmental politics. He categorizes the literature into six groupings with the following starting points:

- international anarchy;
- knowledge processes;
- plurality of political actors;
- structural inequalities in the global system;
- capital accumulation; and
- sustainability.

The anarchic structure of the international system (the lack of a central authority), Paterson notes in his first grouping, is a core assumption of much of the IR literature— infusing traditions such as realism and liberal institutionalism. The central concern of this research is the power and influence of sovereign *states*. A second body of research focuses on the role of science and knowledge in the formation and evolution of international policy. A third thread of research begins with an intentional shift away from a state focus, and highlights the role of multilateral institutions, corporations, and nongovernmental organizations (NGOs) in global environmental

⁶ Both quotes are in Zürn 1998, 618.

⁷ Mitchell 2002a.

⁸ Mitchell 2002a, 512.

⁹ Paterson 2006.

politics – the underlying assumption is that these can play a significant, if not in some cases, a larger role than states in the process of global ecological change. A fourth strand begins with a focus on structural inequalities in the global system – ethnicity, class, gender, racism, North–South relations, consumption among the rich and poor, and humanity’s place in nature. A fifth body of literature concentrates on capitalism – on the ecological effects of the process of extraction, production, and accumulation. And finally, a sixth thread of research presents a radical critique of the politics necessary for true global sustainability – what some label “green” politics. These scholars see a need to reject anthropocentric values and consider an entirely new global ecological ethic, calling for everything from full decentralization to full centralization of global authority.

These three previous reviews suggest a trend in the thinking of those in the field of international environmental politics. Zürn and Mitchell keep the focus on global institutions and regime theory. Paterson expands the parameters further, integrating far more of the literature on the role of the international political economy and the international processes of change outside of regimes and global policy. My chapter builds on the reviews of Zürn, Mitchell, and Paterson to propose even broader parameters for the scope and history of research in the field of global environmental politics.¹⁰

It begins with a brief overview of the history of the field. It then divides the literature into three general themes: states, cooperation, and global governance; the political economy of governance; and civil societies, knowledge, and ethics. The logic of this division is straightforward. The first grouping deals with more traditional topics of international relations and the environment, topics that keep the analysis largely at the global level of states, international organizations, global governance, and security. The second deals with more traditional topics of global political economy and the environment: capitalism, trade, corporations, and markets. The third deals more with broader issues that tend to span the politics and economics of the international system – civil societies, norms, the role of knowledge, and ethics – topics that tend to draw on the literature from the previous two groupings as well as more from disciplines outside of international relations, international law, and economics.

These groupings of research are not sealed categories – individual research inevitably crosses over in terms of substance and historical development. The groupings are useful, however, in terms of organizing the GEP literature in a way that reveals common themes and current trends. It also helps to demonstrate a core argument of this chapter: that academic research in global environmental politics is embracing an expanding set of research questions, theoretical constructs, and methodological approaches, gaining confidence and independence as a field of social science inquiry. The aim of the chapter is not to develop a static picture of the field, but rather, as with all dynamic literatures, to show the current contours and possible future directions of research. It begins with a sketch of the history of the field.

History of the Field

The history of GEP research is woven into the history of global environmental change. Environment as a word with political or social meaning is relatively new. In the 1950s, the limited times the word appeared, it referred to little more than the work or home environment.¹¹

¹⁰ The literature reviews of Zürn, Mitchell, and Paterson all use the term “international environmental politics.” As is common today, I intentionally use the term “global” instead of “international” to stress the movement of the field well beyond a study of interstate relations and the global environment.

¹¹ MacDonald 2003, 151.

Environmental issues began to emerge onto the global agenda in the 1960s and early 1970s, culminating in the international policy world in the 1972 United Nations Conference on the Human Environment, held in Stockholm, Sweden (thus known as the Stockholm Conference). There was a steady, if relatively small, research community on the international politics of environmental change in the 1970s, though much of it was comparative analysis of national policies, or broader analysis of the politics of Third World development. There was, within IR, relatively few books and articles in mainstream journals. There were some major contributions, however, including books by Richard Falk,¹² Harold and Margaret Sprout, William Ophuls, and Michael M'Gonigle and Mark Zacher.¹³ The journal *International Organization* also published a special issue in 1972 on "International Institutions and the Environment Crisis" (in recognition of the Stockholm Conference). In the same year the International Studies Association established the Harold and Margaret Sprout Award for the best publication in international environmental affairs.

There were, however, many great works outside of the IR discipline in the 1960s and 1970s that continue to this day to influence GEP research. This includes seminal articles such as Garrett Hardin's 1968 article, "The Tragedy of the Commons," which continues to have valuable explanatory power for understanding the politics of issues such as climate change. It includes, too, bestselling books such as Rachel Carson's *Silent Spring*, Paul Ehrlich's *The Population Bomb*, Donella Meadows et al.'s *Limits to Growth*, E.F. Schumacher's *Small is Beautiful*, and James Lovelock's books on the theory of Gaia – that it is useful to conceive of the planet as a living, holistic organism.¹⁴

Political science research on the global environment began to expand over the 1980s.¹⁵ The publication in 1987 of *Our Common Future* by the World Commission on Environment and Development (WCED), which called on the global community to integrate the principle of sustainable development,¹⁶ along with the 1992 UN Conference on the Environment and Development in Rio de Janeiro, brought global ecological change to the top of the agendas of world leaders. Three academic journals devoted largely or in part to global environmental issues appeared around this time. Konrad von Moltke founded *International Environmental Affairs* in 1989. "The purpose," he wrote, "was to provide an outlet for academic research on international environmental affairs at a time when most peer reviewed academic journals were hardly taking the material."¹⁷ Three years later Gordon J. MacDonald founded the *Journal of Environment and Development*.¹⁸ The journal *Environmental Politics* was founded in the same year, accepting submissions on both domestic and international environmental politics.

GEP research took off after the 1992 Rio Conference. Numerous doctoral students finished PhD dissertations on global environmental change in the 1990s, and increasing numbers of political science departments began to offer courses in global environmental politics. There were countless new academic books and journal articles on global environmental politics,

¹² Falk 1971.

¹³ Sprout and Sprout 1971; Ophuls 1977; and M'Gonigle and Zacher 1979.

¹⁴ See Carson 1962; Ehrlich 1968; Meadows et al. 1972; Schumacher 1973; and Lovelock 1979, 1995, 2009. Also, see Litfin ch. 32 for a contemporary analysis of the value of Gaia theory.

¹⁵ For example, Young 1981; Caldwell 1984; and Haas 1989.

¹⁶ The WCED (1987, 43) defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

¹⁷ Email correspondence between Konrad von Moltke and the author, 11 December 2003.

¹⁸ MacDonald was editor until his death in 2002.

including articles in mainstream IR journals such as *International Organization*, *International Security*, and *World Politics*.

International Environmental Affairs folded in 1998. The gap, however, was soon filled by the journal *Global Environmental Politics*, which I founded in 2001 along with Jennifer Clapp, Karen Litfin, Marian Miller, and Paul Wapner. This journal explicitly invites “submissions on contemporary international and comparative environmental politics.” Importantly, the publisher of *Global Environmental Politics* is the MIT Press, which publishes the political science journal *International Security*, and which published *International Organization* until it shifted to Cambridge University in 2003. The backing of such a powerful press has helped *Global Environmental Politics* to reach into virtually all of the world’s major university libraries, helping to assure the field of global environmental politics a lasting and significant impact on social science scholarship. One reflection of the growing strength of this field is the rapid rise in the citation ranking of this journal (2.231 in 2010 in the Thomson Reuters Journal Citations Reports, placing it ninth in environmental studies and fifth out of 139 in political science). Another is the rapid increase over the last few years in the number of general overviews of the politics of global environmental change suitable as university textbooks.¹⁹

There has been, then, sweeping changes to the GEP field over the last decade-and-a-half. I now turn to outline the current state of research, beginning with the first of three overarching themes: the role of states, international cooperation and institutions, regimes and global governance, and international security.

A Secure World of States, Institutions, and Regimes

I divide this literature into three broad groupings, depending on the primary focus: the ecological impacts of the anarchic global system of sovereign states; international environmental agreements and institutions; and the links between environmental change and state security.

A common argument, especially among realists in the IR discipline, is that states, in pursuit of self-interest in a global structure of sovereignty, will destroy the commons (open access resources) unless radical constraints are put on state authority, such as a world government (which many see as highly unlikely, if not, impossible). Garrett Hardin’s parable of a tragedy of the commons captures much of the logic of scholars who see the sovereign state system as the core cause of the looming (or current) global ecological crisis.²⁰ These arguments tend to assume that global institutions, regimes, norms, and identities are epiphenomena – that is, these cannot fundamentally alter the characteristics of state impacts.²¹

Many social scientists, notably Nobel Laureate Elinor Ostrom, question the logic and accuracy of the parable of a tragedy of the commons, arguing that there are numerous cases of communities “managing” common-pool resources in ways that contradict Hardin’s tragedy.²² In a review of Hardin’s parable, Joanna Burger and Michael Gochfeld point out that: “Many of the examples of wise use management of common-pool resources involve local resources managed by small, relatively homogenous communities.”²³ There is also significant research

¹⁹ Lipschutz 2003; Maniates 2003; Elliott 2004; Dryzek 2005; Dryzek and Schlosberg 2005; Speth and Haas 2006; DeSombre 2007; Mitchell 2009; O’Neill 2009; Vig and Kraft 2009; Axelrod et al. 2010; Chasek et al. 2010; Conca and Dabelko 2010; Kütting 2010; Clapp and Dauvergne 2011; and Switzer 2011.

²⁰ Hardin 1968.

²¹ See Litfin 1998 for an analysis of the sovereignty–global ecology relationship.

²² See Ostrom 1990. Hardin 1998 acknowledges that he should have added the modifying adjective “unmanaged” to the word commons.

²³ Burger and Gochfeld 1998, 26.

to suggest that the “real” world of ecological management is far more complex than Hardin’s portrayal, with diverse policies and intricate governance structures (for example, Vogler ch. 13).

Much of this literature, as the chapters by Bernstein (ch. 11), Biermann (ch. 12), Mol and Spaargaren (ch. 15), and Selin (ch. 16) in this book reveal, is now collecting under the banner of global governance, which often (although not always) strives to explore a more complex and multilevel image of the driving forces and constraints – both formal and informal – on state and corporate activities.²⁴ There is great diversity of research here, although some scholars, such as Oran Young and Frank Biermann, are now working to collaborate across large research groups to develop a more unified theory of environmental governance: what many of these scholars are calling “earth system governance.”²⁵

The field of international environmental law strongly influences the study of the global politics of international environmental negotiations and agreements. At the same time, however, much of the IR literature on environmental regimes is potentially valuable for a legal analysis of international environmental law. The IR literature revolves around questions about the formation and consequences of regimes. Why do they form? What are the consequences? What are the most effective mechanisms to foster compliance? Are regimes effective? What is the influence of business, NGOs, networks of experts, knowledge, and science and scientific uncertainty on global regimes?

Many chapters in this book, including Barkin (ch. 2), DeSombre (ch. 3), Gehring (ch. 4), Skodvin (ch. 5), Dimitrov (ch. 6), and Andresen (ch. 7) further advance research on such questions. Already, the literature on regimes has added greatly to the understanding of the formation and evolution of international law as well as state compliance with global commitments.²⁶ It has also contributed to understanding the history of environmental diplomacy and politics,²⁷ an evaluation of the impact of particular conferences and international meetings,²⁸ the understanding of the domestic sources of international environmental policy,²⁹ and the role of the developing world.³⁰ This literature has in particular advanced the broader social science efforts to measure the effectiveness of regimes.³¹

Regime theorists assume that it is rational for states to cooperate on global environmental affairs, as preserving this environment is in the long-term interests of the state. Unlike classical realists, these scholars assume that institutions do matter – that global politics involves more than just power and objective interests, but also perceptions, ideas, knowledge, identities, and meanings. Scholars have studied in great detail the regimes and multilevel governance

²⁴ Conca 2000, 2006; Vogler 2000, 2003; Bretherton 2003; Jordan et al. 2003; Newell 2003, 2008; Paterson et al. 2003; Betsill and Bulkeley 2006; Bernstein and Ivanova 2007; Pattberg 2007; Rabe 2007; Biermann and Pattberg 2008; Gupta 2008; Speth 2008; Webster 2008; Young 2008; Okereke et al. 2009; Selin and VanDeveer 2009; Bäckstrand et al. 2010; Biermann et al. 2010; Bulkeley and Newell 2010; and Clapp and Wilkinson 2010.

²⁵ The Earth System Governance Project website is <http://www.earthsystemgovernance.org>.

²⁶ Young 1989, 1994, 1998; Elliott 1994; Mitchell 1994a; Bernauer 1995; Hough 1998; Joyner 1998; Zürn 1998; Wettestad 1999; Vogler 2000, 2003; Dimitrov 2005; Bodansky 2009; Chasek et al. 2010; and Desai 2010.

²⁷ Hurrell and Kingsbury 1992; Brenton 1994; Caldwell 1996; Tolba with Rummel-Bulska 1998; and Ivanova 2007, 2010.

²⁸ Rutherford 2003; Wapner 2003; Dimitrov 2010; and Andresen ch. 7.

²⁹ Schreurs and Economy 1997; DeSombre 2000; and Harrison and Sundstrom 2010.

³⁰ Miller 1995; Steinberg 2001; and Gupta ch. 8.

³¹ Susskind 1994; Victor et al. 1998; Weiss and Jacobson 1998; Wettestad 1999; Kütting 2000; Miles et al. 2001; Young 2001b, 2002; Mitchell 2002b; Hovi et al. 2003; Stokke and Hønneland 2007; and Böhmelt and Pilster 2010.

mechanisms to manage the ozone layer and the earth's climate.³² There is also significant research on other regimes, with increasing focus on the growing importance of multilevel governance: biotechnology, desertification, biodiversity, intentional pollution and shipping at sea, whaling, persistent organic pollutants (POPs), and the 2001 Stockholm Convention.³³

A related area of research focuses on the role of institutions in global environmental affairs. Some of this examines institutions, policy, and international laws. Some focuses more on global institutions and assistance to developing countries to enhance capacity.³⁴ Other scholars are analyzing the growing role of international environmental bureaucracies more generally as well as the importance of long-term environmental policy.³⁵ There are also many studies of the impact of particular institutions, such as the UN Environment Programme (UNEP), the Global Environment Facility (GEF), and the World Bank.³⁶ There is increasing research as well on the implications of the interplay of environmental institutions.³⁷

A longstanding debate also exists on the need for a new global environmental institution – perhaps called a World Environment Organization (WEO).³⁸ Some proposals for a WEO to some extent follow the logic of Hardin's and Ophuls' calls for a world authority to overcome what is, for them, a core reason for the overuse and ecological destruction of the commons (open access resources): states that pursue self-interest in an anarchic global system.³⁹ Others, however, see a WEO more as a counter to the World Trade Organization (WTO) rather than as an authority able to control states (as would, say, a world government).

There was also a significant strand of environmental research throughout the 1990s that focused on the links between environmental change, scarcity, and security (especially of states). Much of this work refers to or builds on Thomas Homer-Dixon.⁴⁰ Homer-Dixon's research hypotheses and initial evidence appeared to have the potential to generate a lasting body of literature. The work of Richard Matthew and Ted Gaulin, for example, builds nicely on his ideas.⁴¹ Yet many researchers over the last decade were unable to find a strong empirical link between environmental degradation and violent conflict. The criticism of Homer-Dixon's research by scholars such as Dan Deudney, Nancy Peluso, Michael Watts, and Simon Dalby,⁴² and the research by scholars such as Indra de Soysa (for example, ch. 10) who find stronger links between abundance and conflict, seems likely to further discourage future research on

³² For ozone, see Litfin 1994; Benedick 1998; Grundmann 2001; and Parson 2003; for climate, see Newell 2000; Rowlands 2000; Paterson 2001; Skjærseth and Skodvin 2001; Rabe 2007; Vezirgiannidou 2009; Vormedal 2010; Skodvin ch. 5; Dimitrov ch. 6; Rayner and Jordan ch. 17; Hoffmann ch. 18; and Bulkeley and Schroeder ch. 19.

³³ For biotechnology, see Newell 2003; and Andree 2007; for desertification, see Corell 1999; Corell and Betsill 2001; and Bauer and Stringer 2009; for biodiversity, see Rosendal 2001; Mushita and Thompson 2002; and Deke 2008; for pollution and shipping, see Mitchell 1994b; and DeSombre 2006; for whaling, see Peterson 1992; Stoett 1997; Andresen 2000, 2001; and Epstein 2008; for POPs, see Lallas 2000/2001; Schafer 2002; Clapp 2003; Downie and Fenge 2003; Selin and Eckley 2003; Yoder 2003; and Selin 2010.

³⁴ Vig and Axelrod 1999; and VanDeveer and Dabelko 2001.

³⁵ Biermann and Siebenhüner 2009; and Sprinz ch. 14.

³⁶ For UNEP, see Downie and Levy 2000; and Ivanova 2007, 2010; for GEF, see Streck 2001; Ervine 2007; and Mee et al. 2008; for the World Bank, see Fox and Brown 1998; Gutner 2002; Babb 2009; Phillips 2009; Park 2010; Gutner ch. 27; and Park ch. 28.

³⁷ Rosendal 2001; Andersen 2002; Young 2002; Selin and VanDeveer 2003; and Oberthür 2009.

³⁸ Biermann 2000 and 2001 argues for a WEO (also see Biermann ch. 12); von Moltke 2001 and Najam 2003 argue against; for overviews of possible benefits and drawbacks, see Whalley and Zissimos 2001; and Biermann and Bauer 2005.

³⁹ Hardin 1974; and Ophuls 1977.

⁴⁰ Homer-Dixon 1991, 1994, 1999.

⁴¹ Matthew and Gaulin 2001.

⁴² Deudney 1990; Peluso and Watts 2001; and Dalby 2002.

this topic (especially among graduate students). Homer-Dixon's research also appears to be moving toward new ground with the publication in 2000 of his Canadian bestseller, *The Ingenuity Gap*, and his 2009 book on oil depletion and climate change, *Carbon Shift*. That said, Richard Matthew's chapter in this book on peacebuilding (ch. 9) shows how research on environmental security can still produce compelling research findings.

The IR research does not exist in an airtight box, and inevitably it overlaps with the research on the political economy of global environmental change – the topic of the next section.

Global Political Economy

Are there limits to growth? Is the globe heading toward a global ecological calamity? The work of Thomas Robert Malthus – who foresaw a looming crisis for humanity as exponential population growth outpaced arithmetic increases in food – has influenced many to answer these questions with a resounding, yes!⁴³ Paul Ehrlich is one of the most notorious Malthusian scholars. Others in this tradition include Donella Meadows, Lester Brown, and Norman Myers.⁴⁴ Other scholars, however, label such research “doomsaying,” a result of a misunderstanding of basic economics and a misrepresentation of global statistics.⁴⁵

Numerous studies strive to document and explain the political economy of global environmental change, with many drawing on traditions in critical political economy (for example, see Newell ch. 20; Kütting ch. 21; and Paterson ch. 29). Much focuses on industrialization, the changing nature of production, and the role of economic growth.⁴⁶ Recently, there has also been significant attention to the ecological impact of consumerism and a global consumerist culture.⁴⁷ The environmental impact of the process of globalization is also generating increasing research, including calls for localization of the world economy.⁴⁸

Others point more to the impact of capitalism and North–South structural inequalities, such as the research on the ecological shadows of Northern economies on the South.⁴⁹ The concept of ecological footprints is one of the concrete ways scholars have tried to compare the ecological impact of individuals across the globe.⁵⁰ This measures the total area in global hectares (one hectare of average biological productivity) needed to sustain a person's consumption of food, water, clothes, shelter, transportation, and consumer goods and services. It vividly demonstrates the great inequality of global consumption. There are also sweeping critiques of capitalism, with scholars such as John McMurtry equating it to a cancer.⁵¹ Others have focused on the ecological impacts of particular aspects of capitalism, such as financial crises, the world discount economy, the position of the South in the global political economy, Third World debt, and aid and financing for sustainable development in the South.⁵² There is also a large literature

⁴³ Malthus 1798.

⁴⁴ Ehrlich 1968; Meadows et al. 1972; Myers 1979; and Brown 2003.

⁴⁵ Simon 1981, 1996; Easterbrook 1995; and Lomborg 2001, 2007; also, see Lomborg 2009 for a cost–benefit analysis critical of global environmentalism.

⁴⁶ Carson 1962; and Davidson 2000.

⁴⁷ Maniates 2001; Princen 2001, 2005, 2010; Princen et al. 2002; Rees and Westra 2003; Schor 2004; Paterson 2007; Lange and Meier 2009; Gerth 2010; and Robbins 2010.

⁴⁸ Conca 2001; Fuchs and Lorek 2002; and Dauvergne 2011; for specific work on localization, see Hines 2000, 2003; and Cavanagh and Mander 2004.

⁴⁹ Dauvergne 1997, 2008.

⁵⁰ Wackernagel and Rees 1996.

⁵¹ McMurtry 1999.

⁵² George 1992; Dauvergne 1999; Najam and Robins 2001; Najam 2002; Brunn 2006; Fishman 2006; Hicks et al. 2008; Clapp 2009; Laird 2009; Shell 2009; Cribb 2010; Dauvergne and Lister 2010a; Gutner ch. 27; Park ch. 28.

on what would constitute a green political economy, a “deep” economy of sustainability, and a sustainability ethic.⁵³

The two largest bodies of research on particular aspects of capitalism are on trade and corporations. Recent research on free trade agreements, trade liberalization, and the WTO is particularly extensive.⁵⁴ Some scholars see trade as a core cause of global ecological harm, for example when prices do not reflect the full ecological or social costs, which in turn encourages overconsumption.⁵⁵ Recently, environmentalists and scholars have been linking this to an emerging world food crisis – and perhaps even “food wars.”⁵⁶ Others argue that trade is compatible, indeed, essential for global sustainability, as it promotes economic growth (which reduces poverty) and fosters efficient use of the globe’s resources.⁵⁷ Still others argue that trade is becoming increasingly compatible with global environmental goals, as institutions such as the WTO become more attuned to environmental concerns. There is also a large literature on the impacts of trade in particular products, such as hazardous chemicals and waste.⁵⁸

The literature on corporations and environmental damage is at least as large as the literature on trade.⁵⁹ There is also a big literature on how multinational corporations (MNCs) spin language to appear to address environmental concerns – sometimes called “greenwash.”⁶⁰ Another branch of this literature looks at how MNCs influence global environmental negotiations and treaties.⁶¹ There is a growing literature as well on business and environmental governance and business as environmental actors.⁶² Many frame this as private (or sometimes corporate or nonstate) environmental governance.⁶³ One emerging strand is focusing on the growing importance of globalizing supply chains.⁶⁴

Many scholars are now exploring the rise and importance of corporate social responsibility for global environmental management.⁶⁵ Scholars such as Arthur Mol examine corporations in the context of ecological modernization.⁶⁶ A strand of the corporations and environment literature examines (and debates) the prevalence of pollution havens.⁶⁷ This literature also integrates the effects of trade, dealing with questions such as: do governments lower environmental standards and regulations to attract firms, creating a competitive “race to the

⁵³ Daly and Cobb Jr 1989; McKibbin 2007, 2010; Korten 2009; Makower and Pike 2009; Princen 2010, plus ch. 36. Lipschutz ch. 37 reflects on the history and value of the concept of “sustainability.”

⁵⁴ Esty 1994, 2001; Charnovitz 1995; Conca 2000; Rao 2000; Tussie 2000; Neumayer 2001; DeSombre and Barkin 2002; Charnovitz 2007; and Jinnah ch. 30.

⁵⁵ Arden-Clarke 1992; Daly 1993, 1996; and Dauvergne 2010.

⁵⁶ Bello 2009; also see Cribb 2010. Litfin ch. 32 builds on Gaia theory to imagine a transformation of the global food system.

⁵⁷ Bhagwati 2004.

⁵⁸ Also see O’Neill 2000, 2001; Clapp 2001; and Selin 2010.

⁵⁹ For logging, see Dauvergne 2001; Humphreys 2006; Tacconi 2007; and Dauvergne and Lister 2011; for mining, see Jackson and Banks 2003; Ali 2004; and Nest 2011; for fishing, see DeSombre and Barkin 2011; for industrial waste, see Clapp 2001; for oil, see Gedicks 2001; for biofuels, see Elliott 2009; and Dauvergne and Neville 2009, 2010.

⁶⁰ For example, Parr 2009.

⁶¹ Levy and Newell 2005.

⁶² Garcia-Johnson 2000; Clapp 2001; Dauvergne 2001; Laferrière 2001; Fuchs 2005; Levy and Newell 2005; Falkner 2008, plus ch. 25; Finger and Svarin ch. 22; and Levy ch. 24.

⁶³ Hall and Biersteker 2002; Falkner 2003, 2007; Levy and Newell 2005; Vogel 2008; Clapp and Fuchs 2009; Newell and Paterson 2010; Fuchs and Kalfagianni ch. 23; and Gulbrandsen ch. 26.

⁶⁴ Bair 2009; Cavusgil and Knight 2009; Emmett and Sood 2010; and Dauvergne and Lister 2011.

⁶⁵ Vogel 2005; Auld et al. 2008; Utting and Clapp 2008; Esty and Winston 2009; Horrigan 2010; and Lister 2011.

⁶⁶ Mol 2002.

⁶⁷ Clapp 2002; Hall 2002; Wheeler 2002; Ederington 2007; Elliott and Shimamoto 2008; and Dean et al. 2009.

bottom”? Do developing countries become “stuck at the bottom” as global competition exerts downward pressure on domestic regulations? Do multinational investors in effect export environmentalism and raise standards in developing countries? Is there “a race to the top” as environmental regulations and technologies spread from the highly developed economies to the rest of the world?⁶⁸ There are also in-depth studies of corporate compliance and initiatives within firms, as well as the impact of certification schemes and private regulation on corporate conduct.⁶⁹ Less common, are studies from within the business community, such as Stephan Schmidheiny’s *Changing Course*.⁷⁰

Civil Societies, Knowledge, and Global Ethics

The literature on civil societies, knowledge, and ethics is pulling the field of global environmental politics away from a focus on states, formal institutions, security, and the role of the global political economy. It is also drawing in more and more literature from disciplines outside of political science, international law, and economics – the most important disciplines in the literatures in the 1990s.

Interest in the role of civil societies in IR has grown steadily over the last decade or so. This in part reflects the great increase in the number of nongovernmental groups. But it also in part reflects a shift away from the view that states alone shape global affairs. There is now a vast literature on the role of the environmental movements and civil society in global environmental management.⁷¹ There are a wide range of specific research questions. How and to what extent do NGOs influence global environmental negotiations? What is the impact of NGOs on the environmental behavior of states and corporations? Are the actions of civil society groups altering the global culture? If so, what does this mean for the actions of states and firms and individuals? And what does this mean for the global allocation of scarce environmental resources?

The environmental literature on norms, consciousness, identities, meanings, and the construction of global environmental discourse further pushes the GEP literature away from states (or at least from a focus on the structural power of states).⁷² So does some (though not all) of the literature on knowledge and the role of science. Some of the science and environment literature examines the influence of epistemic communities and networks of experts in global environmental management. Some explores the role of science and knowledge in global environmental governance.⁷³ Some is more explicitly critical of so-called “science” and the treatment by international institutions of non-Western knowledge systems.⁷⁴

The literature on environmental ethics, too, is gradually expanding the scope of the GEP field further still. This literature is far too large to survey all of the arguments and themes here.⁷⁵

⁶⁸ Vogel 1995; Porter 1999; Garcia-Johnson 2000; and Wheeler 2001.

⁶⁹ Rowlands 2000; Prakash 2000; Cashore et al. 2004; Prakash and Potoski 2006; Conroy 2007; Boström and Klintman 2008; Dauvergne and Lister 2010b; and Gulbrandsen 2010 and ch. 26.

⁷⁰ Schmidheiny 1992.

⁷¹ Wapner 1995, 1996, 2002b, 2010; Kolk 1996; Keck and Sikkink 1998; Lee and So 1999; Newell 2000; Tesh 2000; Betsill and Corell 2001, 2007; Bryner 2001; Tamiotti and Finger 2001; Hochstetler 2002; Ford 2003; Pellow 2007; Clapp and Swanston 2009; and McAteer and Pulver 2009.

⁷² Bernstein 2001; Jasanoff 2001; Wapner 2002a; Dryzek 2005; and Dauvergne and Neville 2011.

⁷³ Haas 1992; Keck and Sikkink 1998; Dimitrov 2005; Young 2008; and Williams ch. 34. Humphreys (ch. 35) explores this with specific reference to the latest debates about the potential value – and risks – of geoengineering the planet as a solution to climate change.

⁷⁴ Ehrlich and Ehrlich 1996; Shiva 1997; and Long Martello 2001.

⁷⁵ See, to begin, Hardin 1974; DesJardins 1999, 2005; Pojman 2000, 2001; Wenz 2001; Young 2001a; Schmidtz and Willott 2002; Light and Rolston III 2003; and Van DeVeer and Pierce 2003.

One area of rising interest is the ethics around consumption.⁷⁶ Other areas of research include “environmental human rights,” the role of democracy, and “ecological citizenship” (Conca ch. 31; Bäckstrand ch. 39; Dobson ch. 40). Some, like Elliott (ch. 38), are considering how citizen rights and obligations within a cosmopolitan ethic might be able to rectify environmental harms and inequities. There is also a large literature on environmental justice, racism, and feminism.⁷⁷ Much of this originates in the discipline of philosophy, in the field of political theory, or from within the activist community. So far, it has had less impact on GEP than one might initially expect given so many global environmental issues raise fundamental moral and ethical questions.

One reason is the place of normative theory within IR, a relatively minor branch of study in today’s political science departments within North America.⁷⁸ It is stronger in Europe, but not enough to infuse GEP with a strong tradition of ethical research. This does, however, seem to be changing, partly, I think, because ethics and normative questions are a natural area for GEP scholars, as many have an underlying normative belief in improving and protecting the global environment.

Conclusion: The Future of Research?

It is hard, if not impossible, to predict future research output. New theories will inevitably emerge – as will new actors, processes, and problems. The GEP field will naturally continue to evolve. Yet it is possible to discern some emerging trends in current research, ones that at least *suggest* likely future directions.

Theoretically, researchers will no doubt continue to explore the critical role of states, sovereignty, regimes, and institutions. These literatures are now highly developed. GEP scholars continue to break new ground in regime research even as much of the IR literature veers away from regimes and toward more formal legal processes, norms, and nonstate forces of change. The environmental literature has been especially significant for improving the understanding of global cooperation and the creation of global regulations. It is also pushing forward the theoretical literature on global governance as IR scholars explore ways to embrace a more holistic analysis of global environmental management.

The field of GEP is extending its reach, however, as more and more scholars explore issues through a local–global lens and with more stress on the exploitative nature of global capitalism – that is, on the ecological injustice and inequalities of patterns of global power and resource control. The theme of violence will continue within this research group, although not, in my view, with as much attention to the degradation–scarcity–violence hypothesis, but rather violence in the context of broader patterns of suppression and rebellion in a world of limited valuable resources.

The politics of some of the most intransigent global environmental problems – such as climate change, biodiversity loss, desertification, fresh water, transboundary pollutants, and deforestation – will continue to generate significant empirical research. Climate change in particular looks set to sustain the most research into the near future: and some scholars are even worrying that the field of GEP is turning into the study of climate change. Original contemporary research on other issues such as ozone depletion seem destined for less research, although,

⁷⁶ Micheletti 2003; Harrison et al. 2005; Henderson 2006; Divinney et al. 2010; and Maniates and Meyer 2010.

⁷⁷ Dobson 1998; Bretherton 2003; Agyeman 2005; Sachs and Santarius 2007; Shiva 2008; Salleh 2009; and Vanderheiden 2009.

⁷⁸ Smith 1992.

more retrospective studies of such issues will no doubt continue to generate significant theoretical insights.

On the other hand, the research on transnational societal forces, ethics, corporations, and capitalism (such as consumption) seems set to grow even further. Here, I shall go out on a limb, and predict that GEP scholarship will naturally drift into more normative research – as so much raises gnawing ethical questions, from the personal to the global. This trend could perhaps even help to reinvigorate the broader study of normative theory in IR.

More certain, it seems that GEP research will continue to expand beyond the discipline of political science. Already, international law, economics, and geography are highly influential, but more and more political science scholarship draws on literature across an ever-wider range of disciplines. Scholars in other disciplines, too, are gradually integrating the literature in IR and comparative politics on the global environment.

This is changing the nature of GEP research. Over the last three decades much of the theoretical GEP literature aimed to contribute to political science – such as the research on measuring the effectiveness of environmental regimes. My sense, however, is that more of the future literature will focus explicitly on trying to explain the political (defined broadly) causes and consequences of global environmental change. That is, the purpose will increasingly shift to explaining environmental change rather than, say, the formation of political institutions. Much of the future research will also, in my admittedly speculative view, overtly strive to advance the knowledge within an increasingly large and confident group of scholars within the GEP field.

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PART II

STATES AND COOPERATION

2 When regimes backfire: institutional expectations and environmental deadlock

J. Samuel Barkin

It has become commonly accepted by students of global environmental politics, and international relations more broadly, that international institutions matter.¹ This mirrors a general acceptance of the import of international organizations (IOs) in the discipline of international relations more broadly. There remains substantial debate, however, on what effects IOs have both on the practice of international politics and on environmental outcomes. It is often assumed that these effects will generally reinforce cooperation,² but is this necessarily the case? This chapter examines a set of circumstances in which institutions can serve to undermine rather than reinforce international environmental cooperation. More specifically, it argues that when international institutions politicize issues by making information about relevant decision-making procedures available to a broader public than would otherwise have access to it, this information can have the effect of polarizing national positions on an issue, thus making a cooperative outcome more difficult to achieve.

The irony of this argument is that it is the clarification of decision-making procedures by the institution that can lead to the counterproductive, or anti-cooperative, effects. This sort of clarification, along with the provision of information more broadly, is often referred to as the “transparency” function of IOs. Transparency is claimed by many institutional theorists as one of the key functions of international institutions, and one of the areas in which they can be most effective.³ It can promote international cooperation in two ways. The first is by perfecting the market for international cooperation by increasing communication and decreasing misunderstandings among states in situations in which the international community as a whole can maximize utility by cooperating.⁴ The second is by informing and allowing political access to groups within states, such as activist nongovernmental organizations (NGOs) in the case of environmental cooperation, that want to encourage international cooperation, so that they can in turn encourage cooperative behavior on the part of governments.⁵

The interaction of these two processes, however, can lead to a situation in which transparency backfires. When increased information flows or procedural clarity empower or galvanize domestic groups that have a particular interest in cooperation, then the transparency will have its intended effect. But not all domestic groups will be more favorably disposed to international cooperation on environmental issues than the specific governmental bureaucracies charged with making the details of policy on an issue. The latter group has a specific vested interest in the issue at hand. If their bureaucratic role is to manage policy on a specific issue, they will

¹ For example, Haas et al. 1993; and Jervis 1999, respectively.

² Barnett and Finnemore (1999) provide an exception to this generalization.

³ For a general review of the transparency function in institutional theory, see Mitchell 1998.

⁴ Fearon (1995) goes so far as to make the argument that the international community can always maximize utility by cooperating. The implication of this is that the market-perfecting aspect of transparency will always improve cooperation.

⁵ Haas et al. 1993.

have a professional interest in the sound management of that issue in its own context. Other affected groups, however, may well see the issue in the context either of other issues they care about more or of other specific interests that the issue impacts upon. Absent transparency, the relevant governmental bureaucrats will likely have more information relevant to that particular issue than the population at large, and thus a greater ability to influence decision-making with respect to it. When the transparency provided by international institutions has the effect of informing and empowering domestic constituencies about an issue with respect to which their interests are less well served by cooperation than the interests of the government officials charged with making policy on the issue, then the institution will have the effect of making cooperation less tenable.

This chapter proceeds in three main stages. The first reviews the two primary bodies of theory that the argument draws on, the literature on the transparency function of international institutions, and the literature on domestic politics and international cooperation. The second stage elaborates on the specific argument, by discussing the conditions under which increasing the supply of information to the general public about decision-making rules at the international level can decrease the possibilities for cooperation. The third stage briefly discusses a case to illustrate the argument, the role of the Treaty Concerning Pacific Salmon in US–Canadian disputes over the Pacific salmon fishery throughout most of the 1990s. A final section concludes.

Transparency and Domestic Politics

The theoretical literature that is the primary point of departure for this chapter is regime theory, particularly the subset thereof known as neoliberal institutionalism. A classic definition of regimes speaks of “rules and decision-making procedures around which actor expectations converge.”⁶ Regime theory focuses specifically on cooperation between states, and is the starting point for a major strain of the literature in global environmental politics. Neoliberal institutionalism finds the source of regimes in imperfections in the market for international cooperation. Markets can be perfected by improving information flows, decreasing transaction costs, and specifying property rights.⁷ All three of these functions are related to information broadly understood, and all can reasonably be included under the heading of the transparency function of international institutions.⁸ Specifying decision-making rules and procedures helps to fulfill all three market-perfecting functions, by allowing participants to be informed what the rules and procedures are, by making the decision-making process simpler and faster, and making it clear who has what rights with respect to the decisions made.

While neoliberal institutionalists admit that IOs can be actively counterproductive, there is rarely any discussion of the circumstances under which this can occur.⁹ It is generally assumed in this literature that, once created, international institutions will have a positive, or at worst neutral, effect on international cooperation if they succeed in improving transparency.¹⁰ This is true almost by definition: improving transparency is, by definition, market perfecting, and more perfect markets are, again by definition, more efficient than less perfect markets. Therefore, perfecting the market for international cooperation by increasing transparency should increase cooperative efficiency.

⁶ Krasner 1983, 2.

⁷ The classic statement of this approach to regime theory is Keohane 1984.

⁸ Kratochwil and Ruggie 1986.

⁹ See, for example, Haas et al. 1993, 5.

¹⁰ Mitchell 1998.

In order for this logic to work, however, two assumptions must hold: that states are more concerned with the total gains to be had from cooperation than with the distribution of those gains, and that they act as rational unitary actors. The neoliberal institutionalist literature began with a focus on the origins of international institutions,¹¹ and from this perspective the first of the two assumptions is non-problematic. If the assumption holds, states should demand an institution, and if it does not, then they should not. This approach works for the study of the creation of international regimes, but not necessarily for the study of their effects. Once an institution has been created to provide transparency with respect to an issue, it will continue to provide that transparency even if actor preferences change. If preferences change to a primary concern with the distribution of gains, then the transparency provided by the regime will cease to promote cooperation. In this case the institution will no longer be furthering the cause of international cooperation, but nor will it be hindering that cause. It will simply be ineffectual. But might the international institution actually have an effect on national preferences?

This is where the second assumption underlying neoliberal institutionalism comes in. As long as states behave as rational unitary actors, there is no reason to expect that institutional transparency will change national preferences from cooperative to noncooperative outcomes. But once one allows for domestic politics, this conclusion is no longer as straightforward.¹² National preferences reflect some process of domestic political intercourse, in which the preferences of various actors are expressed, and through the domestic political system either one set of preferences comes to predominate or some compromise is found.¹³ As such, when we speak of “national preferences” we are speaking not only of the point of departure for the analysis of relations among states, but also of the outcome of a domestic process of foreign policy-making, of the range of various individual interests represented in the country, aggregated and mediated through the political system.

The second body of theory that this chapter draws on focuses specifically on this part of the process, the formation of an identifiable national interest from the interplay of domestic politics.¹⁴ There is a growing literature that applies formal analysis to the effects of domestic political processes on outcomes in international relations.¹⁵ Some of the recent work in this field specifically addresses the question of the relationship between domestic politics and international cooperation,¹⁶ and the effects of information on this process. The literature tends to conclude, other things being equal, that asymmetries of information make cooperation less likely;¹⁷ in other words, that the more equally informed the various power centers in a domestic polity are, the more likely it is that the domestic political process will generate a national preference conducive to a cooperative outcome. This chapter asks a somewhat different question: not what the effects of information are on the chances of the creation of an international institution in the first place, but what the effects of the transparency created by international institutions are on the continuation of cooperation.

¹¹ The seminal statement of neoliberal institutionalism, for example, is Keohane 1983.

¹² Putnam 1988, for example, argues that we should look at international negotiation as a two-level game, in which state leaders are constrained by domestic politics, but can use this constraint strategically. Looked at this way, the state seems far from the ideal type of a rational unitary actor.

¹³ For a discussion of this process with respect to US foreign policy-making, see Hilsman et al. 1993.

¹⁴ For example, Moravcsik 1997.

¹⁵ Some early examples include Alt and Eichengreen 1989; and Mayer 1992.

¹⁶ For example, Evans et al. 1993.

¹⁷ Milner 1997, 20–22.

Peter Haas, Robert Keohane, and Marc Levy address this question.¹⁸ They argue in the context of international environmental governance that international institutions, by making patterns of governance more transparent, can have the effect of empowering domestic nongovernmental environmental organizations. These in turn can then steer the expressed national interest in a more environmental direction. This logic suggests that the mechanism of domestic politics should act as a positive feedback loop to the cooperative effects of increased transparency on global governance. The implicit assumption, though, is that the domestic organizations that are empowered by this process prefer a higher degree of international cooperation than those who would be making the policy decisions absent the increased transparency. This assumption may in fact often be true, but is not necessarily the case. What happens then?

The model developed in the next section addresses this question, in two stages. The first stage borrows a model from the literature discussed above, of a situation in which there are two states, with preferred outcomes at different places along a line representing the range of potential outcomes. This model suggests the circumstances under which this situation will result in cooperation, and when one or the other state will forgo cooperation in preference for the status quo outcome. The second stage starts from this conclusion, and models the results of the institutionalization of cooperation when cooperation is the result of the first stage. It does so by including some of the effects of transparency on the preferences and motivations of domestic actors in the process of determining national preferences. In short, it established the circumstances in which increased transparency will encourage a state to cooperate with the outcomes generated by the institution, and when it can discourage a state from doing so.

The Model

Stage One

The model proceeds in two stages. The first stage is a relatively straightforward two-player game played at the international level, which draws heavily on a model developed by Helen Milner and Peter Rosendorff.¹⁹ The players, *A* and *B*, are countries, taken here as rational unitary actors (this assumption will be relaxed for country *A* in stage two of the game). The range of policy options is represented by a unidimensional policy space, along which player preferences, *a* and *b*, can vary. Each player will have an ideal point somewhere along the line that represents the policy space, and will attempt to rationally maximize by achieving an outcome as close to this point as possible.

Figure 2.1 illustrates cooperative patterns in this situation. The horizontal axis indicates all possible values of the status quo, the outcome absent cooperation between the two players. The vertical axis provides the range of possible outcomes of the situation, onto which can be mapped both of the players' preferred outcomes, and all potential negotiated outcomes. The diagonal line is the default outcome, representing what happens when there is no negotiation and thus the outcome equals the status quo absent cooperation. The thick line represents the Nash equilibrium outcome of the game. When the status quo is between the preference points of the two players, no cooperation is likely. When the status quo is either less than the preference of player *A* or greater than the preference of player *B*, cooperation is the equilibrium outcome, at

¹⁸ Haas et al. 1993.

¹⁹ Milner and Rosendorff 1996.

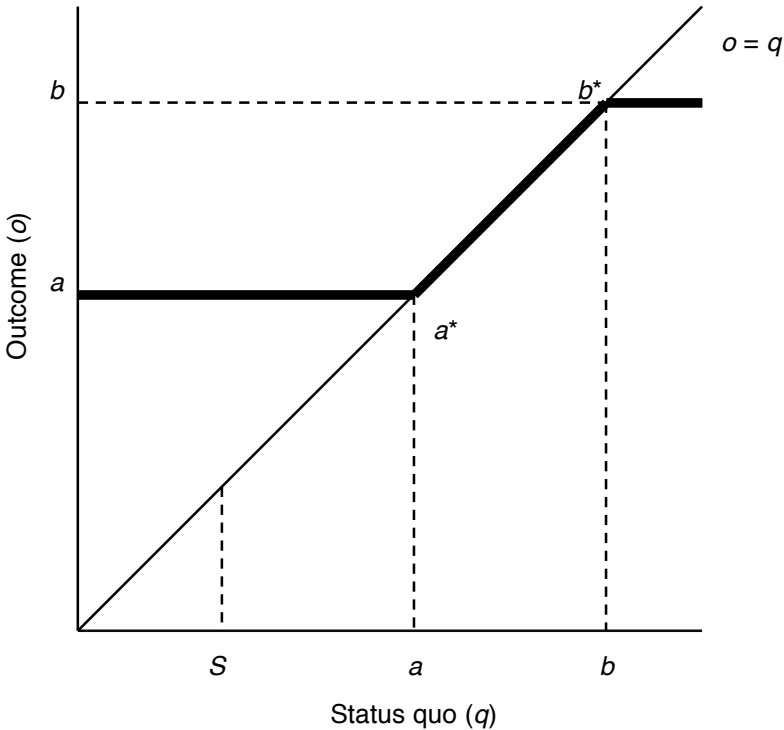


Figure 2.1 Policy space with original preferences

points a^* and b^* , respectively.²⁰ This is the case because when the status quo is between the two preference points, the gains from one player from cooperation are matched by the losses of the other. When the status quo is outside of the range between the two preference points, however, moving toward the closer preference point makes both players better off at the same time.

Assume that the status quo outcome is S . In this case, the equilibrium outcome of the game is cooperation to achieve an outcome of a^* . Assume further that the two players formalize this cooperation, through the creation of an international institution designed to create transparency and thus overcome some of the problems of cooperation under anarchy. We then have an international organizational structure that is having the effect of institutionalizing cooperation at outcome a^* , reinforcing the equilibrium outcome of the game.

With static preferences, this outcome remains in equilibrium. But what if preferences change? Specifically, what if country A 's preferences move to the left, away from country B 's? In Figure 2.2, a_1 represents A 's original preference, resulting in the IO discussed above. a_2 represents a change in A 's preferences. As a_2 moves farther and farther away from a_1 , the difference between the outcome with the institution and A 's preferred outcome increases. A continues to be better off honoring the terms of its cooperation with B and cooperating with the international institution rather than reverting to the status quo absent cooperation while $(a_1 - a_2) < (a_2 - S)$.

²⁰ This proposition is proven in Milner 1997, 263–4.

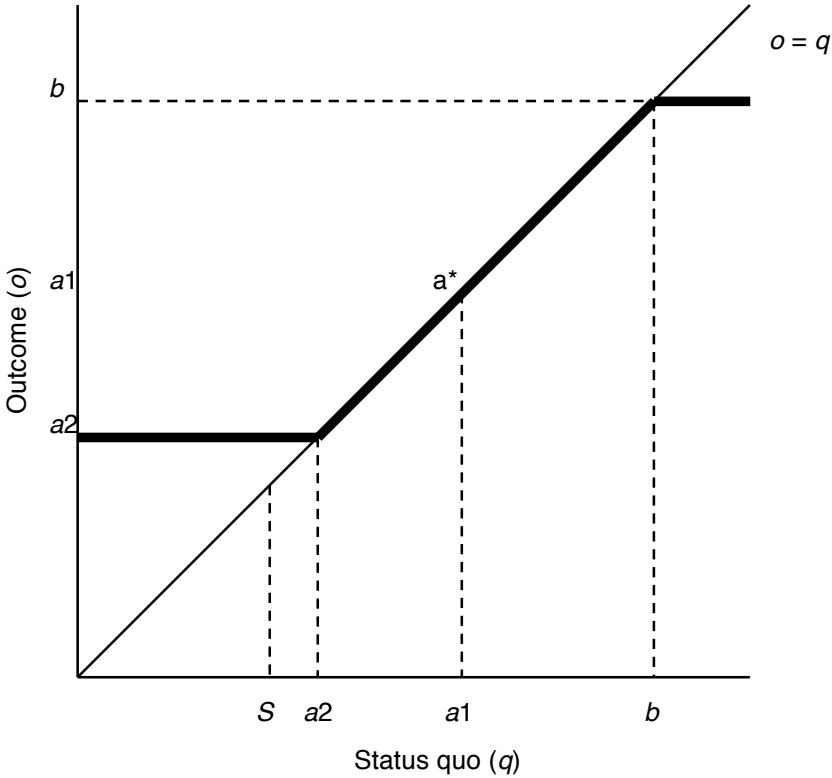


Figure 2.2 Policy space with changed preferences

In other words, A should abide by the rules of the organization as long as its new preference point, a_2 , is closer to the institutional outcome than to point S , the status quo absent cooperation. Once $(a_1 - a_2) > (a_2 - S)$, when A's new preference is closer to the status quo absent cooperation than the established cooperative outcome, it is in A's interest to get out of its obligations under the terms of the IO created to institutionalize cooperation. In the meantime, it remains in B's interest for the organization's rules, or in other words the cooperative outcome, to continue to be the outcome. The degree of A's interest in reverting to the status quo absent cooperation increases mathematically until a_2 reaches point S , and then remains constant.

Thus as soon as a_2 passes the midpoint between a_1 and S (moving toward the origin), there will be an increasing tension between A's interest in getting out of its obligations to the IO, and B's interest in maintaining those obligations. This tension may well lead to conflict between A and B and to the collapse of international cooperation on the issue in question. There remains the question of what can cause A's preferences to shift in this way. This can of course happen for exogenous reasons. But there are also circumstances in which the IO itself can have the effect of causing this shift in preferences, and it is these circumstances that are explored in stage 2 of the game.

Stage Two

This stage of the game deals with the domestic politics of state A. In this stage we have three players represented: the national executive, the proximate decision-maker, and the motivated public. The national executive is the chief political decision-maker in the country, usually either the national president or prime minister. Assume that the primary interest of this actor is re-election.²¹ The proximate decision-maker is that official, set of officials, or governmental organization that is immediately responsible for regulating in a specific issue area. For example, in issues of marine conservation, it would be officials from the department of commerce or the ministry of fisheries and oceans. The motivated public is the median position of that element of the national political public most motivated to be interested in the issue.

We assumed above that the national executive is primarily interested in re-election. With respect to those issue areas in which the motivated public's interest is engaged, re-election is often best ensured by adopting that interest.²² So when the motivated public's interest is engaged on an issue, we can expect the national executive's preferences to follow those of the motivated public, other things being equal. But publics are not interested in all issues equally, and when there is not a strongly motivated or significantly sized public engaged on an issue, the primary interest of the national executive is much less clear. Without the need to respond to the interests of a motivated public, however, it is much less likely that the national executive will interfere with the actions of the proximate decision-maker with respect to a given issue. The national executive, as an individual, cannot be ubiquitous; it is for that reason that governments develop bureaucratic structures in the first place. The executive is therefore likely to focus its finite attention on those issues on which there is a motivated public engaged.

Proximate decision-makers are likely to have privileged information about decision-making within their areas of bureaucratic responsibility, as they are the ones who participate directly in these processes. In the case of international negotiations, for example, they are the ones doing the actual negotiating. The greater the extent to which they have privileged information, the greater the extent to which the motivated public must rely on them for its information. Absent independent information on an issue, the motivated public will have difficulty becoming engaged with it in a way that contradicts the political analysis of the proximate decision-makers. So the greater the amount of privileged information held by proximate decision-makers on a given issue, the less likely it is that a motivated public will be able to strongly express an interest that differs from that of the proximate decision-maker. And thus the less likely it is that the national executive will interfere in the actions of the proximate decision-maker in the interest of the motivated public. In principle this holds true of any kind of privileged information, but in practice it is used here with reference to cases that deal specifically with procedural transparency and information on decision-making rules and procedures.

This is where the IO comes in. To the extent that one of its functions is transparency, and that this transparency has the effect of clarifying regime rules and procedures, the institution is going to have the effect of making all of the players in the game better informed. But it is likely to do so differentially. The more transparency the institution creates with respect to decision-making processes, the less information about them remains privileged, thereby undermining the informational advantage of the proximate decision-maker. In other words, to the extent that the international institution has this effect of making information generally

²¹ For a discussion of this assumption, see Lohmann and O'Halloran 1994.

²² Lohmann and O'Halloran 1994.

available that had previously been privileged, it will serve to diminish the gap in information between the proximate decision-maker and the motivated public. This in turn will make it more likely that a motivated public will become politically engaged on the issue. And it is when a motivated public becomes engaged on an issue that the national executive is likely to interfere with the actions of the proximate decision-maker on that issue.

At this point we refer back to the game in stage 1, as illustrated in Figure 2.2. The preference $a1$ of actor A represents the national interest as expressed in negotiation with actor B on the issue at hand. In the absence of strong popular sentiment on the issue within country A , preference $a1$ is likely to reflect the preferences and interests of the proximate decision-maker. As a result, the outcome that the international institution is designed to reinforce is the outcome preferred by A 's proximate decision-maker on the issue. But the transparency created by the institution, by increasing the chances of a motivated public becoming politically engaged with the issue, can make it more likely that the national executive will interfere with the actions of the proximate decision-maker. If the preference of A 's motivated public is to the left of the proximate decision-maker, at $a2$, then the transparency in turn makes it more likely that the national interest of A as expressed on this issue will be $a2$, the interest of the motivated public, rather than $a1$, the interest of the proximate decision-maker. Thus the transparency that was a primary function of the international organization will have helped to undermine the preference structure underpinning the cooperation that the institution was designed to institutionalize.

The political process described in this game is most straightforward in a democratic political system. But a similar sort of process can occur with non-democratic government as well. As long as proximate decisions with respect to an issue are being made by bureaucrats with privileged information on that issue, and as long as the national executive is beholden to some broader political interests, the transparency function of IOs can serve to shift national preferences from those of the proximate decision-maker to those of a motivated public with a distinct and particular interest in the issue.

The Salmon Treaty and US–Canadian Relations

An example of this dynamic in action is US–Canadian conflict over the regulation of the Pacific salmon fishery in the mid-1990s. Actor A , the state the domestic politics of which are affected by institutional transparency, is the United States. Actor B is Canada. The institution in question is the Treaty Concerning Pacific Salmon, a bilateral treaty signed in 1985.²³ The context of the dispute is the increased pressure on the salmon fishery of the Pacific Northwest in the early-to-mid-1990s, caused by a combination of declining market prices for salmon, which encouraged salmon fishers to increase their catches in order to be able to pay off the fixed capital costs of participating in the fishery, and declining salmon stocks.²⁴

Salmon hatch and spend their youth in freshwater streams and ponds, but then head out to the open ocean, where they spend the bulk of their adult lives. They then return to the streams of their birth to spawn and die. The salmon stocks of the Pacific Northwest, including those from the states of Alaska, Washington, and Oregon, and the Province of British Columbia, swim around the Pacific in a clockwise direction. This means that most of the salmon swim through the jurisdictions of both countries on their way back to their freshwater spawning sites, which in turn means that effective regulation of the fishery requires the cooperation of both

²³ Canada Treaty Series 1985.

²⁴ This case is drawn from Barkin 2006.

jurisdictions. The Treaty Concerning Pacific Salmon was an attempt to set the ground rules for such cooperation. It stipulates that total catch limits should be set scientifically, at the maximum sustainable yield, and that this total limit should be divided between the fisheries of the two countries according to the ratio of salmon that spawn in each country. In other words, the decision rule for dividing the catch functionally assigned ownership of a fish to the country in which it hatched. The Treaty provided clear decision rules, but did not provide specific numbers for either the total size or the division of salmon quotas. The specifics were to be decided in protocols based on these rules and current scientific data, and renegotiated annually as data on the current health of stocks became available. Beginning in 1992 these negotiations failed to generate agreed-upon quotas.

The original agreement represented the preferences of fisheries officials in both countries, which were at the time fairly similar. Continued overfishing would reduce the overall level of the salmon stock, and thus threaten the viability of the fishery in the long run. The Treaty was based on the ideas of equity and scientific management, principles that seem an appropriate basis for long-term cooperation in an issue area such as this. The Treaty also had the effect of increasing the transparency of the issue, by basing annual negotiations on clear and public guidelines rather than on closed-door political negotiations. If one begins with the assumption that transparency aids international cooperation, then the Treaty should have provided a sound basis for effective joint national management of the salmon fishery in the Pacific Northwest.

When pressure on the fishery increased in the early 1990s, however, the opposite happened: the Treaty became an obstacle to, rather than the basis of, cooperation. The transparency of the decision rules did not greatly affect Canadian preferences; even as the failure to agree on quotas became an increasingly public issue in the mid-1990s, public opinion favored an agreement that fulfilled the terms of the Treaty. American popular preference, however, was unwilling to accept cooperation on the terms of the Treaty. Because the salmon migrate through American waters on their way to Canadian spawning grounds, and because Canadian stocks on the whole were healthier than those of Washington and Oregon, the motivated public on the issue in those states tended to the belief that American fishers would do better without the agreement at all.

An interesting complication in this case is provided by the federal nature of government in the countries involved. In both countries the governments at both the federal and state/provincial levels are involved in making policy with respect to this issue, although the exact division of responsibilities differs in the United States and Canada. While the motivated public with respect to this issue in both countries as a whole was small enough to be of little political importance, it was concentrated in the immediately relevant states and provinces, and was easily big enough there to be politically relevant. And in both countries it was the fisheries officials and executives of the federal governments who were concerned with making the Treaty work, while the executives at the state/provincial level showed a much greater willingness to obstruct cooperation in order to appeal to the local motivated public. But the net effect of obstruction at that level was that American preferences were dragged away from the outcome generated by the Treaty, and Canadian preferences became more fixed upon Treaty outcomes than would otherwise have been the case. The transparency created by the Treaty helped popularize the issue sufficiently in the relevant states and province that the proximate decision-makers, in this case fishery officials, were no longer able to act on their own preferences when these preferences diverged from those of the motivated public.

The result was six years in which no quota was agreed upon, and in which the salmon stocks of the Pacific Northwest continued to be depleted. Furthermore, as the issue became increasingly

publicized, popular passions came to be increasingly inflamed, and the rhetoric of debate came to be one of nationalism as much as one of conservationism. The dispute seemed to grow out of proportion to the issue at hand as the Canadians continued to insist on the implementation of the Treaty as signed, and the Americans continued to refuse. By the summer of 1996, for example, fishers in Prince Rupert, BC, were assaulting an American ferry, and the government of British Columbia was trying to throw the US Navy out of its base on Vancouver Island. An agreement was finally reached in 1998, on terms considerably more concessionary to American fishers than those dictated by the Treaty. In other words, cooperation could only come about when the parties agreed not to be bound by the decision-making rules of the Treaty.

The proposed counterfactual here is that without the decision-rule transparency of the Treaty Concerning Pacific Salmon, the United States and Canada would not have gone through six years of increasingly tense confrontation on this issue before agreeing on a quota for the salmon fishery. The issue would have been resolved sooner, and with considerably less confrontation and ill will. Without the Treaty, fisheries officials would have been free to explore various workable compromises without having them compared to a publicly known baseline; Canadian officials would not have been as pressured to get an agreement that divided the quota on the basis of where the salmon spawn, and US officials would have been less pressured to reject agreements based on this same principle. The transparency that was designed specifically to prevent the politicization of the management of the Pacific Northwest salmon fishery had the effect of politicizing it even further.

Conclusions

The Pacific salmon case is representative of a broad array of contemporary forms of institutionalized cooperation in specific issue areas of global environmental politics. The conflict over the salmon fishery threatened neither to undermine broader patterns of US–Canadian cooperation nor to have serious global ramifications. By the same token, however, it is surprising how pointed and nationalistic the conflict became, given the scope and institutionalization of the bilateral cooperative relationship, particularly since the fishery represents a fairly minor economic issue. In this sense, the salmon issue represents a hard case – if institutional transparency can cause this level of conflict in this setting, then we can reasonably expect that it could have even worse consequences in disputes between countries with less history of institutionalized cooperation, or that concern more vital interests. But it is not the only example of this phenomenon – climate-change negotiations provide another. To the extent that the Kyoto Protocol provided a clear guideline for expectations of national commitments, and these commitments were increasingly seen as inadequate, the Protocol can be understood as institutionalizing a failed model of cooperation that is actively interfering with efforts to find a workable model for international cooperation on the issue.

The model developed here is intended as a heuristic, rather than as a specific description. The intent is not to claim that actors always behave rationally. It is to suggest that even when they do, transparency at the international level can undermine cooperation. International institutions, through the mechanism of transparency, can have the effect of politicizing issues in broader national publics, where such issues might not otherwise have had much impact. It is in these situations, where the increased transparency of decision-making rules and procedures take an issue out of the hands of proximate bureaucracies with cooperative inclinations, and thereby more actively involve a broader public with less cooperative inclinations, that international institutions can be counterproductive to the goal of international environmental

cooperation. This is not to say that such situations are necessarily common. The broader public may well often have more cooperative inclinations than proximate decision-makers. The argument here is simply that it can happen, and happen in cases that have real ramifications for global environmental politics. The extent to which it does happen is an empirical question, and further research would be required to determine the frequency of this sort of phenomenon. But the fact that it can happen suggests that we should ask what the effects of increased information flows will be on the domestic politics of participant states before assuming that transparency should necessarily be designed into international organizations.

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3 Changing issue structure to avoid free riders: protecting the ocean environment

Elizabeth R. DeSombre

International cooperation is difficult under the best of circumstances. States have the ability to decide whether they want to participate or not in cooperative measures. Because second-order cooperation to monitor or enforce any cooperative agreement is subject to many of the same cooperative difficulties as the initial decision over working collectively to address an issue in the first place, even those agreements that are made may not be well implemented. Free riders abound, and cooperative regimes are underprovided.

Environmental issues face even greater difficulties than some other issues in garnering cooperation, because of structural characteristics of environmental problems that make cooperation to address them particularly fragile. The common-pool resource (CPR) nature of most environmental problems means that, unlike with public goods, those states that remain outside a cooperative endeavor can undermine the ability of those within an agreement to protect the resource in question. In this circumstance, free riders do not just weaken the likelihood of agreement; they have the ability to undermine the success of an agreement altogether, and the fear of free riding may be sufficient to undermine creation of such agreements in the first place.

Lessons from efforts to circumvent free riding on international cooperation in one particularly challenging issue, standards on ocean ships, suggests some possible broader conclusions about the conditions under which state cooperation may be marshaled to address CPR problems. If the problem that prevents successful cooperation on environmental issues is that free riders cannot just decrease the advantages of but actually undermine cooperation in a situation that is rival, efforts to change the issue structure – to move cooperation to an area with similar effects but where the outcome is not rival – can provide a tool for working towards cooperation on collective problems in a context that gives free riders a greater incentive to join and makes them less of a problem if they do not.

CPR Problems

Cooperation is difficult on the international level because of the anarchy of the international system. It can set up prisoner's dilemma-like situations in which even those actors that would collectively (and individually) benefit from cooperation in the long run are unable to cooperate because of efforts to achieve their individually best outcome or to avoid their worst.¹

Many issues on which cooperation may be useful – such as financial and monetary stability, or collective security – can be considered public goods. These are underprovided because those who benefit from them can do so without contributing to their provision. But because these benefits are not diminished by the use of those who take advantage of them, a small subgroup of relevant actors can cooperate to provide the good despite the existence of free riders.

¹ Axelrod 1984.

		Excludable	
		Yes	No
Rival	Yes	Private goods	CPRs
	No	Club (toll) goods	Public goods

Figure 3.1 Issue structure

Members of this k-group may benefit sufficiently from the provision of the good that is worthwhile to provide it even if others that benefit are not contributing to its provision.²

Most environmental problems, however, are less amenable to resolution by a subset of relevant actors. They can be described as CPR problems,³ based on two characteristics of the structure of the issue. These are excludability (whether the resource can be accessed, either practically or legally, by all) and rivalness, also referred to as subtractability (whether the resource can be diminished by use) (Figure 3.1).

For CPRs, the prisoner's dilemma is especially stark, because any major actor that remains apart from the cooperative system does not simply diminish the cooperation (as may be the case with fewer states in a free trade or development assistance agreement), but may be able to prevent it altogether. Consider, for instance, a fishery. Even if most of the relevant actors in the system agree to limit their fishing, their cooperation can be undermined by one actor that does not follow the limits. Similar situations can be found in ocean or atmospheric pollution, where emissions by one sufficiently important state can weaken any reductions undertaken by all others, possibly even to the point where the reductions fail to accomplish significant environmental improvement. For CPRs, the lack of involvement by one major state does not just decrease the quality of the cooperation, but may be able to undermine its effects completely. In a game-theoretic matrix, then, the differences between the payoffs for cooperation and defection are much larger for CPR issues than for public or club goods.

Despite this structural problem, states have been willing and able to cooperate on international environmental issues without the participation of all relevant actors. But, as in the case of ozone depletion in which developed states took the lead before developing states were willing to participate, the early-movers recognized that their ability to address the issue adequately rested on eventually involving those who could contribute to the depletion of the ozone layer.⁴ The extent to which cooperation over a CPR is undermined by its potential free riders is due, in part, to the extent to which free riders actually have the capacity – or the foreseeable capacity – to contribute meaningfully to the environmental problem in question. In the case of protection of the ozone layer, the use (or even production) of ozone-depleting substances is a fairly inexpensive and low-tech undertaking, and the same is true in fishing.

Club goods are less frequently discussed in international relations, but certainly play an important role in international cooperation. The main advantage that club goods have over

² Hardin 1982.

³ Barkin and Shambaugh 1999.

⁴ DeSombre 2000.

public goods or CPRs for the creation of cooperative agreements is the element of exclusion. It is the possibility of free riding – actors gaining the benefits of an agreement without fully participating – that is seen as the main cause of the underprovision of collective goods. Club goods, by allowing those who do not cooperate to be kept from the benefits of the cooperative arrangement, increase the likelihood that those who would benefit from access to the advantages of the club can be persuaded to join the cooperative effort.

Note that private goods also fill a category on Figure 3.1. They are both rival and excludable. Because they are things that can be owned by a given actor who can keep others from using them, they tend not to be discussed in the context of international relations. A state's own sovereign territory can be considered to be a private good, and in some ways its control over the actions of its nationals traditionally fit within this category. Although not discussed at length here, this category is, increasingly, considered as a potential solution to CPR problems as well. One of the possible solutions Garrett Hardin suggests to the "tragedy of the commons"⁵ he posits is privatization – making a rival good excludable. If you can exclude others from access, it matters less that the good is rival, because the owner can then be the one to make the calculation of whether using it is worth the diminishment of its value. Privatization is a more likely solution to problems on the domestic level, but there are some discussions of how privatization could operate on the international level. At minimum, the kinds of cap-and-trade systems envisioned globally for carbon emissions (and a related individual transferable quota system discussed in academic circles for the regulation of global fisheries) create some form of private property. This solution is not addressed here, however.

Flag-of-convenience Shipping

Shipping is an excellent industry across which to explore the difficulties of international cooperation on global environmental issues, especially in the context of globalization. Cooperation on protection of the ocean from pollution, or its resources from overharvesting, is done through international agreements negotiated by states. These agreements are binding on the ships of the states that have negotiated and ratified the relevant agreements, but they are not binding on the ships of states that have not.

What makes the situation in shipping particularly complicated is the question of which ships are considered to be under the jurisdiction of a state. Ships must have national registration, and historically that registration was almost always in the home state of the ship owner. But beginning in the 1920s, and expanding after World War II, some states began to run open registries, offering ship registration to non-nationals.⁶ These states began competing for ship registrations based on their low costs, some of which come from not taking on international rules that the owner's home state might have adopted and that impose operational costs. These ship registries are, somewhat derisively, said to offer "flags of convenience" (FOCs).

This problem is not unlike difficulties that arise in other issue areas or industries. If states collectively regulate air pollution, or the use of toxic substances, the rules are only binding on actors operating within their territories. Multinational corporations, or industries looking to set-up shop in low-cost locations, can gain permission to operate in a state that has not taken on these rules, and can operate outside whatever international regulatory structure might exist. Shipping allows for a somewhat easier form of industry movement to take advantage of

⁵ Hardin 1968.

⁶ DeSombre 2006.

regulatory laxity than do other similar industrial decisions, because a ship owner need never visit the flag state (whereas a factory has a physical location within the state that has regulatory jurisdiction over it), but the principle is the same, and the impact on global regulation controversial.

There are major debates over whether the globalized nature of the international political economy, which allows freer movement of goods and thus production (or ship registration) in low-cost (and -regulation) environments creates a race to the bottom,⁷ harmonization upwards,⁸ or some other situation.⁹ It is nevertheless clear that in the case of shipping, ship registrations shifted dramatically, to lower-standard locations, once the option became widely available. Liberia, one of the early open registries, became the world's largest ship registry in late 1970s, surpassed in the early 1990s by Panama, the first to offer open registration, which remains the largest ship registry today.

Once this form of ship registration became available, ship owners began to make use of it in great numbers. Currently an estimated 64 percent of the world's merchant fleet tonnage is registered in FOCs. Three of the four largest oil tanker registries are FOCs, as are three of the four largest bulk carrier registries, and all four largest container ship registries.¹⁰ Most international trade – 95 percent as measured by weight and two-thirds as measured by volume – is transported on the oceans by ships,¹¹ so the standards of the ships that carry this trade have a global effect.

The concern about open registry states remaining outside of international regulatory processes was well-founded. These states are less likely than traditional registries to adopt international rules creating environmental, safety, and labor standards. States that run traditional registries have adopted a much higher percentage of the applicable international rules pertaining to labor, safety, and environmental standards on ships than have those states that offer open ship registration.¹²

At the same time, the standards required by ships registered in the major maritime states have been allowed to decline as well, though to a lesser extent. The increasing phenomenon of second and international registries, created by or in some way affiliated with traditional maritime states, accounts for a relaxing of some of the shipping standards previously upheld by major maritime states. Denmark, Germany, Norway, Portugal, and Spain have created international registries. These are open registries, in that they allow registration from any state, but they are targeted at, and generally composed of, ships whose beneficial ownership is in these states. Because these registries are located in the states in question, ships in the international registries are held to the same international agreements that the states have adopted. Two important constraints are relaxed, though: taxes and fees for registration are generally lower, and crewing restrictions are relaxed, allowing ship owners to hire crews from a wide variety of nationalities, at lower pay rates, and often with less experience.¹³

A similar phenomenon is the opening of “second registries” in offshore territories. The UK, France, the Netherlands, and Belgium all have a variety of second registries in their overseas

⁷ Kahler 1998; and Bonior 1999.

⁸ Vogel 1995; and Garcia-Johnson 2000.

⁹ Zarsky 2002.

¹⁰ Institute of Shipping Economics and Logistics 2003.

¹¹ Steinberg 2001, 14.

¹² Full data on adoption of standards are presented in DeSombre 2006.

¹³ Bernfeld 2004.

territories. These function similarly to international registries but with more independence from the home state; while offshore territories generally adopt the same international agreements as their parent state, they do not always, including in the realm of shipping. These, too, are general open registries, but also tend to register ships with beneficial ownership in the home state. They also relax crewing requirements. The result is standards on the whole that are somewhat lower than in international registries and standard national registries. That is particularly apparent when comparing the Seafarers International Research Centre's ranking of welfare provision and rights protection by flag states; in all cases where the home state and its second or international registry is examined, the home state has a better record on shipping labor protections than the international or second registry.¹⁴

But over time the standards taken on by open registries have actually increased, and the longer a state has been operating an open registry, the higher its standards are likely to be.¹⁵ (With a few notable exceptions: Honduras, one of the oldest open registries, specializes in offering an extremely low-standard regulatory environment.)

These standards have been increased through changing the point of regulation, so that what was initially approached as a CPR problem (in which open registry states were reluctant to take on costly regulations when they could benefit their own business by keeping standards low) has been transformed into collective action around a club good. Three examples from shipping demonstrate how this process can work.

Port State Control

Port state control (PSC) is the power of actors from a state to board, inspect, and if necessary, detain a commercial ship flying a foreign flag that enters its port. One of the most important aspects of this regime is that discrimination in inspection is part of the process: port states determine which ships to inspect, based on the record of the individual ship, the type of ship it is and, most importantly, characteristics of the flag state in which it is registered. Average detention rates are kept for all ships and are aggregated by flag state. An overall average detention rate (a three-year rolling average) for all inspected ships is calculated, and flag states whose ships exceed the average during that period are then identified as those that should be more frequently inspected. Open registries have a consistently higher detention rate than the national registries.¹⁶ The PSC inspections process has, however, provided an incentive to the major open registries to lower their detention rates over time.

PSC has created an incentive for increased standards. Some major open registries, such as Vanuatu, Belize, Cyprus, and Malta, dramatically increased their inspection records, often by taking on previously avoided international agreements, in order to cease being singled out for inspection. Individual vessels would prefer not to be detained, and flag states do not want to gain a reputation for requiring more than their fair share of inspections, particularly since their attractiveness as a registry decreases with the inconvenience borne by vessels flying their flag. As Julio Sosa, the Panamanian Maritime Consul in Houston put it, "No one wants to be in a flag where the coast guard is going to be fingering you all the time."¹⁷ Under a PSC system, truly substandard ships have fewer options about what ports to enter.

¹⁴ Winchester and Alderton 2003, 23.

¹⁵ DeSombre 2006.

¹⁶ DeSombre 2006.

¹⁷ Morris 1996, 15.

Fish Trade Restrictions

The regional fisheries management organizations that have experienced significant fishing by ships flagged in non-member states in order to get around fishing restrictions have created an array of mechanisms that restrict the access of these ships to markets for fish. The most commonly implemented strategy is some kind of catch documentation that accompanies traded fish from the regulatory area (or landed in or transshipped through member states) to allow member states to distinguish between fish caught legally and within the regulatory framework and those caught by ships not bound by regulations. This is frequently followed by an actual requirement by the relevant commission that members refuse to accept imports of fish from ships or states that have kept themselves outside of the regulatory framework, even if their fishing behavior is technically legal. The fisheries commissions that have adopted these types of measures the most fully thus far are the International Commission for the Conservation of Atlantic Tunas (ICCAT), the Commission for the Conservation of Southern Bluefin Tuna (CCSBT), the Indian Ocean Tuna Commission (IOTC), and the commission in charge of the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR).

ICCAT's program has existed for the longest period, with the Bluefin Tuna Statistical Document created in 1992.¹⁸ In 1996 the organization began requiring its member states to restrict imports of regulated species from non-member states whose vessels fished regularly for these species in the convention area. Nine flag states have been targetted (several more than once, for different fish species regulated by ICCAT). While the most recently targetted flag states have not yet responded to these mechanisms of exclusion, the states targetted initially have taken measures to bring their behavior in line with ICCAT requirements. Panama and Honduras joined ICCAT, which means that ships flagged in these states are now bound by the organization's regulations. Belize and St. Vincent and the Grenadines have not joined the agreement, but have agreed to take action to uphold its provisions nonetheless; Belize, in addition, removed a large number of fishing vessels from its registry. The organization estimates that unregulated catch (primarily by ships flying FOCs) declined by about two-thirds between 1998 and 2001.¹⁹ The measures by the other two tuna organizations have not been operational sufficiently long (beginning between 2001 and 2003) to determine effects at this stage, but in the case of the CCSBT trade with non-party states has decreased significantly since the program was introduced.²⁰

CCAMLR created a "Catch Documentation Scheme" for Patagonian toothfish to dissuade unregulated fishing by blocking access to markets in CCAMLR member states for vessels whose ships continue to operate outside the regulatory framework. This scheme works to monitor and track catches of toothfish. Member states have an obligation to prohibit the import of fish caught in an inappropriate manner, or not otherwise documented. Flag states that are not members of CCAMLR may still participate in the program as long as they are able to document that their catches were caught within the conservation regulations.²¹ This aspect of the mechanism is designed, at least in part, to avoid a World Trade Organization challenge to the legality of the trade restrictions, by making them non-discriminatory.

There is evidence that the scheme is having an impact. CCAMLR itself suggests that there has been a decrease in toothfish catch over the first four years of the program.²² Since then a

¹⁸ ICCAT 1992.

¹⁹ Agnew and Barnes 2004.

²⁰ Swan 2002.

²¹ CCAMLR no date.

²² Miller 2004, 10.

consistent price differential has been estimated, with shipments without documentation fetching a price 20 to 40 percent lower than documented catches, and some estimate the amount paid for documented fish is more than double than for undocumented.²³ This differential certainly suggests that well-documented catches could fetch a premium in member states. Fish caught by non-member states (or those that did not follow the conservation regulations) can clearly still find a market – as Stokke and Vidas put it, “there is always some other port”²⁴ – but not one that is as lucrative. And it is generally agreed that the Catch Documentation Scheme has ended landings in member states of fish caught in an unregulated way.

International Labor Unions and Worker Boycotts

The International Transport Workers Federation (ITF), a global labor union operating in 142 countries with 624 affiliated unions, initiated a campaign in 1958 to enforce existing labor standards on open registry ships. The stated goal of the campaign is to prevent or reverse FOC registration by decreasing the labor advantages of flying FOCs.²⁵ The organization uses direct action and boycotts to attempt, with some degree of success, to convince ship operators to meet certain labor standards. The ITF has created a certificate given to states that are in compliance with International Labour Organization (ILO) standards on such things as wages, holidays, and working conditions.

ITF inspectors seek to board a FOC-registered ship when it is in port and ask to see its ITF certificate. If it does not have one, it is given the opportunity to agree at that point to uphold the required standards. If the ship does not have an ITF-approved collective agreement and refuses to agree to ITF demands, the organization attempts to convince crew members to leave or dockworkers to refuse to unload or service the vessel. If the ship’s officers refuse to let it be boarded the ITF can similarly encourage a work boycott. Because the type of agreement offered when a ship is boarded in port requires even higher wages and more stringent standards than those entered into when a ship is not a target of industrial action, ship owners have an incentive to negotiate agreements before they are targeted for action.

What impact has this process had on labor standards on ships? Some have referred to the ITF campaign as “the one really effective anti-FOC force.”²⁶ It has had some effect on labor standards, both raising them generally and holding ship owners to implementing them. Northrup and Rowan suggest that the threat of ITF boycotts and the associated campaign to sway public opinion “have forced FOC countries to raise their standards, to devote more attention and legislation to safety practices, and have greater concern with the rights, training, and well-being of seafarers.” They suggest as well that the ITF’s work has influenced open registries to move their standards towards ILO levels of labor protections.²⁷

The most important incentive for ships to sign agreements with the ITF comes from those who would hire them for the purpose of transporting goods. Those who ship goods to or from states with a strong ITF presence will now often demand that the ships they use sign ITF-recognized agreements so that they can be assured that their ships will not be detained.²⁸ Northrup and Rowan point out that the cost of an ITF-sponsored boycott can be much greater

²³ Miller 2004.

²⁴ Stokke and Vidas 2004, 23.

²⁵ ITF no date.

²⁶ Wiswall 1996, 121.

²⁷ Northrup and Rowan 1983, 134, 150.

²⁸ *Lloyds Shipping Economist* 1996, 9.

than the cost of paying ITF-acceptable wage rates and contributing to the welfare fund.²⁹ At minimum, the number of ships covered by collective agreements approved by the ITF has increased. The ITF claims that approximately 30 percent of ships registered in states designated as FOCs by the organization now have these agreements, covering more than 95,000 seafarers. As of 2004 there were approximately 5,081 total agreements in effect, up from 1,533 as of 1990.³⁰ Even those who consider the overall FOC campaign to be a failure (since it has clearly had little impact on level of FOC registration more generally) concede that the organization has “come close to imposing a worldwide minimum wage ten times higher than some local rates.”³¹

The Power of Exclusion

None of these regulatory processes (or other similar ones within the shipping issue) actually changes the issue structure of fisheries or pollution problems. But they instead each create a separate kind of club good that ships or their flag states want access to, and from which they can be excluded if they do not act in ways that protect the global commons. If ships want to be sure they will not be singled out for inspections in port, want access to the biggest seafood markets in which to sell their catches, or want to be certain to have access to services in port, they need to agree to undertake the other cooperative obligations (flag in states that have taken on international regulation or with reputation for high standards, follow international fishing rules, and take on high labor standards) that gain them admission to the club.

The power of this approach in this issue area is unassailable. Standards on ocean shipping have increased noticeably during the last few decades, despite the increasing number of registry states that continue to emerge to offer low-standard options. Could this strategy that has been so successful in the shipping arena be exported into other issues of international cooperation?

The most important aspect of this approach is the exclusion – in order for this process to work, the relevant actors need to be able to create some system of exclusion. Although that process itself requires collective action, it is, for the most part, action that directly benefits those doing the exclusion. In the case of fishing, for instance, the policies in CCAMLR and other regional fishery management organizations were pushed by states whose fishers were bound by international rules and suffered when those not bound caught fish in ways that helped to deplete the resource. But the process was made possible by the fact that those states whose fishers were bound were also the primary markets for seafood. The exclusion would not have been a successful prod to cooperation were the club from which non-participants were excluded not desirable.

For the most part, the goods around which these clubs are created are not rival. Short of overcrowding effects, it does not matter to those whose ships are able to make use of port services whether more ships are able to get their cargo offloaded in port. But there are sometimes crowding effects that make clubs less valuable. Certainly, access to a market to which others are denied access is more valuable the more others are excluded. The club designation (as well as both the idea of excludability and rivalness) are not in reality binary classifications, but form a spectrum. They nevertheless provide a useful framework for considering – and acting on – these issues.

²⁹ Northrup and Rowan 1983, 133.

³⁰ ITF 2004; and Author's interview with Graham Young, Assistant Secretary, Special Seafarers Division, International Transport Workers Federation, London, May 2004.

³¹ *The Economist* 1997, 75.

Moreover, it is perhaps even an overstatement to indicate that the issues on which the strategy of exclusion can be a successful prod to collective action are only those that begin life as CPRs. It is open to interpretation whether labor standards on ships are, in fact, CPRs. At the margins there are probably ways to consider them such, but in other ways they are different. Nevertheless, they clearly have been a difficult issue around which to garner international cooperation, and the creation of a related club good on this issue lowered the incidence of free riding.

This analysis suggests several conditions that may be necessary for this approach to apply to other international issues. The first is that a cooperative core needs to exist, and that core of intended cooperation needs to make up at least a reasonable initial percentage of actors able to deplete the resource in question (or otherwise cause problems for the commons). The important addition, here, though, is that, unlike the way a standard CPR is conceptualized, this group does not need to be the overwhelming majority, just be large enough to be able to create credible exclusion. There also has to be some overlap between those states creating the club and some kind of market power. In the case of ozone depletion, one of the reasons developed states agreed to the major international assistance given to developing countries to lure them into joining the agreement was that they knew that their efforts to create a club would fail.

The Montreal Protocol initially set-up a trading club, in which states that were in the agreement were not allowed to trade in controlled substances with those outside the agreement. As long as the manufacturing power remained with those who were members, that would indeed give others the strong incentive to join, because it was the only way they could get access to the (still at that time legal) substances they wanted to use. But ozone-depleting substances are fairly easy to manufacture, and some of the developing states who insisted they would remain outside of the agreement were already able to manufacture the substances in question.³² That club would have failed.

The fish market restrictions work in a similar way, and the reason they succeed is that the states that impose fishing rules on their own vessels are also those whose markets are the most lucrative. In order for this process to work in other issue areas, a similar alignment of both action and interests is likely.

Conclusions

Flags of convenience are manifestations of international free riding in a way that is particularly obvious. As long as flag states gain income from running open registries, ship owners benefit from avoiding international standards, and powerful states benefit from trade made lucrative by cheap ocean transport, the phenomenon is not going to disappear. The initial experience with open registries demonstrates the existence of locations that intentionally keep environmental, safety, and labor standards low to attract industrial actors. Most international trade is now conducted on ships registered in these locations. This phenomenon has had at least an initial impact in lowering the overall level of regulation on these issues by ships who registered in open registries. In a world in which shipping runs on increasingly small profit margins, anything ship owners can do to cut costs will help their competitiveness.

Unless, of course, their lowering of standards prevents them from being able to access the advantages of the globalized market. This process does not happen automatically, but comes

³² DeSombre and Kauffman 1996.

from collective action by those who take on higher standards and do not want to lose out, competitively, to those who work outside the system. We have thus seen a general raising of labor standards, increased compliance with fisheries agreements, and gradually increasing adoption of safety and environmental regulations by vessels, even those that fly FOCs. The changes come largely through collective action to increase the cost to open registry vessels of not adhering to international standards.

How this process works goes back to the nature of club goods and the process of international cooperation. The beauty of the club goods approach to management in the mechanisms that have succeeded in nudging shipping standards upwards is that actors find ways to change the structure of an issue area so that successful cooperation becomes more likely. How such a club is created depends on characteristics of the issue in question including the location of the harm, the actors that are most concerned about it, and who they are able to target. It is likely that these characteristics can thus be applied to other issues as well.

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4 International environmental regimes as decision machines

Thomas Gehring

International environmental treaty systems are ambiguous institutions. They are highly dynamic and their decision-making apparatuses are established to promote and accelerate international environmental governance. Yet, they do not rely on powerful bureaucracies (secretariats) and many of them lack formal independence and a status as subjects under international law.¹ Although these institutions do not fit the model of stable international regimes or international treaties, or that of international organizations, they apparently meet the demand of relevant actors. Many of them have been established over the past 40 years to govern specific areas of international relations. The most important examples include the UN Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol, the Vienna Convention on the Protection of the Ozone Layer and its Montreal Protocol, and the Convention on Long-range Transboundary Air Pollution (CLRTAP) and its various protocols.

Theoretically informed assessment of international environmental treaty systems is blurred by the misleading conceptual dichotomy of regimes and organizations that has guided international relations (IR) theorizing for some 30 years. International regimes are largely conceptualized as comparatively stable sets of norms of different quality that lack institutional autonomy (“principles, norms rules, and decision-making procedures around which actors’ expectations converge in an area of international relations”²). This conception has provided the foundation for the fruitful and theoretically guided analysis of intergovernmental and transnational cooperation over the past three decades. However, cooperation theory seeks to attribute the formation, operation, and effects of international institutions mainly to external factors, namely key actors, their interests and constellations of interests.³ It almost totally ignores the process of norm molding. Therefore, organizations have attracted less attention. They are widely conceived of as merely acquiring auxiliary functions in the course of regime formation or stabilization⁴ – or as largely uninteresting appendices of cooperation projects.⁵ New attempts to assess international organizations⁶ are of limited value for understanding environmental treaty systems either, because they have largely collapsed these institutions with their bureaucracies or with other agents operating within their framework.

In this contribution, I examine international environmental treaty systems as organizations in a sociological sense whose main function is the making of collectively binding decisions. Basically, they enable their constituent members to adopt collective decisions on social norms that indicate socially desired behavior that is expected to bring about cooperative outcomes. They do so by providing communicative spheres of interaction separate from the external action

¹ Churchill and Ulfstein 2000.

² Krasner 1982, 186.

³ Simmons and Martin 2002.

⁴ Martin 1993.

⁵ Keohane 1989, 3–4.

⁶ Barnett and Finnemore 2004; Bauer 2006; and Hawkins et al. 2006.

to be governed. In turn, they structure communication and collective decision-making about such norms. This approach abandons the conception of regimes as stable sets of norms and allows analyzing interaction within the organizational structure and the process of norm molding. It focuses on how institutional decisions are made within environmental treaty systems, and, thus, how international governance authority is exercised by such institutions. The chapter first sketches the demand for an organizational device that allows collective decision-making. It then analyzes the nature of the organizational apparatus of international environmental treaty systems, and discusses four consequences, namely the dynamic nature of these institutions, their autonomy from their member states, their constitutionalization, and their capacity to act. A final section concludes.

The Core Function of International Environmental Regimes: Collective Decision-making

While international cooperation can emerge spontaneously, deliberate international governance creates demand for collective decision-making.⁷ Cooperation can gradually evolve from reciprocal interaction and tit-for-tat strategies without communication among actors and without collective decision-making,⁸ but this process is cumbersome, time-consuming, and risky. It is unlikely to evolve in complex situations that involve many relevant actors and are prone to rapid modification. If states intend to actively foster governance within an area of IR and to employ international institutions to change an undesired status quo, they will require the ability to mold social norms *prior* to the emergence of cooperative behavior. For this purpose, collective decision-making has to be institutionally separated from the sphere of action that is to be governed.

Organizations meet this demand. They provide a second sphere of interaction, in which actors can communicate, and collectively decide, about social norms separately from their outside action.⁹ Even a simple intergovernmental negotiation system as the minimum form of such organization provides this function. It enables actors to negotiate a future cooperation arrangement, for example, on how to prevent pollution of a regional sea, before they adapt their behavior outside the system. Upon its finalization and entry into force, the resulting cooperation arrangement indicates socially desired behavior and may serve as an instrument for social change – although such change is uncertain due to possible non-implementation.

The creation of a collective decision-making arrangement establishes a social system that is characterized by its separation from its environment.¹⁰ Before a negotiation process can start, pre-decisions have to be made about the relevant group of participating actors and the range of issues to be discussed, because no round of international negotiations, however broadly designed, can tackle all problems between all possible actors alike. Upon establishing the problem of global climate change onto the international agenda by an epistemic community of atmospheric scientists during the 1980s, numerous questions had to be tackled: should the climate regime be limited to mitigation or should it address adaptation as well? Should it focus on all greenhouse gases or just carbon dioxide? Should it treat climate change as a task mainly for cooperation among industrialized countries, or as a matter of global concern, because even global problems might be successfully tackled, at least temporarily, by a comparatively small

⁷ On the difference between spontaneously emerging and negotiated (or specific) institutions, see Young 1982.

⁸ Axelrod 1984.

⁹ Kratochwil and Ruggie 1986, 765.

¹⁰ See, generally, Luhmann 1995.

group of actors? The subject of the negotiations and the emerging issue area of the future environmental treaty system are not simply “given;” they can, to some degree, be deliberately designed through pre-negotiations.¹¹

The social system reflects a new entity of IR that is exclusively based upon intersubjective agreement; henceforth, it structures communication. The delimitation of issues and actors has an immediate effect on the constellation of interests upon which substantive compromise will eventually be founded. Negotiation theory demonstrates that adding or subtracting issues and parties changes opportunities for actors to pursue their interests.¹² The boundaries of the negotiation system determine from which counterparts actors can expect concessions and which interests might be pursued within a particular negotiation round. Although actors may favor different delimitations of the emerging issue area, it makes no sense to ignore these boundaries, for example, by pursuing issues that have been excluded, or by making concessions toward actors that are not participating. It depends on the system’s substantive boundaries and the delimitation of membership, whether the proposal or claim of even a powerful state matters for the system.¹³ Hence, the social system operates as a selector that processes information exclusively according to its own rules and ignores anything else. Yet, it is at the same time open toward its environment. The decision-making process depends on signals from outside, and it will terminate, if the stream of such signals fades away. The social system emerges from interaction as a new entity of IR. It does not comprise its members or any substantive resources such as money or technology, but it allocates membership roles and makes decisions on the employment of such resources.

All international environmental treaty systems have emerged from an organizational arrangement that allows for collective decision-making, and important sets of international environmental rules will hardly evolve spontaneously. Two variants predominate.¹⁴ Some international environmental regimes are negotiated in separately gathered diplomatic conferences. This is the case typically for early treaty systems, such as the International Whaling Convention, and the Ramsar Convention on Wetlands of International Importance, as well as for regional regimes such as the Convention on the Protection of the Baltic Sea, or the Convention on the Protection of the Rhine. Other international environmental regimes emerge from existing international organizations and similar structures. Hence, the global climate regime had been negotiated within the framework of the United Nations, and the regime for the protection of the ozone layer as well as several regional seas regimes have emerged from the United Nations Environmental Programme (UNEP).

Evolution of Complex Political Systems

Permanent decision-making apparatuses allow steady development of the initial set of norms and organized reaction to changing circumstances. The constituent members of international environmental treaty systems tend to keep their ability to adopt collective decisions upon conclusion of an initial round of negotiations. On this basis, they can afford to establish “incomplete contracts” that deliberately leave certain matters to subsequent decisions.¹⁵ Temporary decision-making arrangements have generally not proven to be well-suited for

¹¹ Gross-Stein 1989.

¹² Sebenius 1991.

¹³ Scharpf 1991.

¹⁴ Gehring 2007, 472–3.

¹⁵ See Williamson 1987, 23.

international environmental treaties, because their substantive obligations have to regulate a subject matter so comprehensively that further decisions become dispensable. Negative experience has been made with some “sleeping treaties” such as the Convention on Nature Protection and Preservation in the Western Hemisphere of 1940 and the African Convention on the Conservation of Nature and Natural Resources of 1968.¹⁶

The decision-making apparatuses of modern environmental treaty systems are surprisingly complex and multifaceted. Increasingly, they undermine the traditional ways of international governance through treaty law. To assess this development and its impact on international environmental governance, a simple intergovernmental negotiation system may be considered as an ideal baseline. In the following, I examine how environmental treaty systems differ from this baseline. Each of these developments is relevant for an increasing number of environmental treaty systems, although not for all of them.

Internalization of the Grand Political Bargains

Modern international environmental treaty systems internalize the original diplomatic conferences and submit their intergovernmental components to organizational constraints.

Virtually all environmental treaty systems comprise a Conference of the Parties (CoP) as the highest decision-making body which transforms an originally external gathering of the constituent members into an organ of the organization.¹⁷ At first glance, this step might seem to have a moderate impact at best. However, there are two important differences. On the one hand, CoPs operate according to the organizational rules. The member states are therefore not as free (unbound by institutional rules) as they were in the case of a separate diplomatic review conference. On the other hand, the CoP, once established, can discharge numerous tasks beyond regular review, and possible amendment, of the valid treaties. Establishing a CoP is therefore essential for a permanent decision process.

International environmental treaty systems tend to internalize the treaty-making process.¹⁸ This institutional innovation allows keeping the traditional instrument of international treaties that require ratification and enter into force only for parties that have ratified, while submitting the process of law-making to organizational constraints. Whereas some early treaty systems, such as the 1979 CLRTAP, still rely on diplomatic conferences, later institutions such as the Biodiversity and Climate Change conventions assign the task of preparing and adopting amendments and protocols to their respective CoPs. The Ramsar Convention has even been amended to allow formal involvement of the CoP in treaty amendments.¹⁹

The increasingly widely used convention–protocol approach illustrates the implications of this step for international environmental governance. The adoption of framework conventions in the absence of substantive obligations has become a separate vehicle for the development of substantive obligations, whereas earlier conventions included procedural machinery and auxiliary rules only subsequent to agreement on substantive obligations. Examples include the CLRTAP, the Vienna Convention on the Protection of the Ozone Layer, and the UN FCCC, all of which lack hard substantive obligations. By concluding a framework convention as a first step of an evolutionary regulatory process, states deliberately modify the subsequent negotiation situation in at least two ways. First, bargaining will be more

¹⁶ Lyster 1985, 124.

¹⁷ Churchill and Ulfstein 2000.

¹⁸ Ulfstein 2007, 882.

¹⁹ Bowman 1995, 33–8.

institutionalized than before.²⁰ Conventions define the problem to be addressed in general terms and delimit the group of actors that are entitled to participate in the ensuing negotiations. Since they establish the basic principles, institutional arrangements, and decision-making mechanisms, later protocols may be very concise, depending on the complexity of their regulatory approach. Second, agreement on a framework convention generates permanent pressure on reluctant member states to reconsider their positions. Hence, the UNFCCC requires governments to develop greenhouse gas inventories, to formulate national strategies and measures, and to cooperate in scientific research on the problem. Due to the ongoing policy process, governments are continuously confronted with demands by other states to cooperate, as well as with new, or collectively evaluated, scientific insights and, increasingly, with claims of domestic or international stakeholders. Such pressure would be difficult to organize within a multipurpose international organization or a separately gathered diplomatic conference.²¹

Tacit Supranationalization through Simplified Amendment and Interpretation

Modern international environmental regimes increasingly envisage secondary decision-making that replaces domestic ratification by consent or intra-organizational procedures. This development implies a gradual supranationalization of the original intergovernmental treaty system.

Simplified amendment procedures delegate law-making functions to the CoPs of environmental treaty systems, even if dissenting parties normally enjoy the right to opt out. Amendments are generally elaborated by the CoPs and adopted by specific majorities of parties. Typically they enter into force automatically after a specified period of time, frequently 90 days, for all member states that do not object, or unless a certain quorum of member states does not object. Although inaction under a simplified amendment procedure with an opt-out clause may be interpreted as implicit consent with a decision,²² such procedures transfer the necessary activity of law-making from individual to collective action. In the absence of domestic ratification, new legal obligations emerge from the collective decision of the competent regime body.

In some environmental treaty systems, simplified amendment procedures are of tremendous importance for the development of substantive obligations. Such decisions are not merely of technical concern; they are highly political and touch upon major interests of member states. The International Whaling Commission is authorized to amend the measures for the protection of whales ("the Schedule"). The prohibition or restriction of international trade in endangered species of flora and fauna under the Convention on International Trade in Endangered Species (CITES) requires that species are classified as endangered or threatened.²³ The Consultative Meeting of the London Convention of 1972 could introduce, by simplified amendment procedures, far-reaching and politically contentious new obligations to restrict and later prohibit the incineration of wastes at sea and to phase out the dumping of industrial and radioactive wastes as an elaboration of the general obligation to prohibit the disposal of wastes at sea. And under the Montreal Protocol, the Meeting of the Parties

²⁰ Young 1991, 282–5.

²¹ For criticisms of the idea that treaty systems start with non-substantive obligations and evolve over time, see Susskind 1994, 30–37; and Downs et al. 2000.

²² Brunneé 2002, 18–20.

²³ Wijnsteckers 2003.

(MoP) is empowered to “adjust” reduction targets for ozone-depleting substances that are already regulated under the Protocol.²⁴

Secondary decision-making is also employed to relieve treaty-making negotiations from numerous tasks that might have been dealt with during treaty negotiations. It thus constitutes a means to accelerate the conclusion of a negotiation by postponing the settlement of pending conflicts. The Montreal Protocol and its London Amendment assigned the task of adopting a non-compliance procedure and an indicative list of incremental costs to be financed by the financial mechanism to the MoP.²⁵ The Kyoto Protocol explicitly assigns a whole range of tasks to the CoP/MoP of the treaty system, including the elaboration of rules regarding emissions trading, the Clean Development Mechanism (CDM) and crediting of sink activities. These decisions were provisionally adopted in 2001 by the Convention’s CoP in the form the “Marrakech Accords,” and formally approved by the Kyoto Protocol’s first MoP.²⁶

Even more remarkable, secondary decision-making is occasionally used to develop an environmental treaty system rapidly through adoption of decisions that are not expressly provided for in the respective treaties. It also serves as a vehicle for renewing normative expectations and bridging unexpected gaps of treaty law so as to avoid doubt about common obligations and preclude their unilateral interpretation. The Montreal Protocol’s MoP established in 1990 an Interim Multilateral Fund by a simple “decision” without a specific competence. The decision, adopted by consensus, was part of a broader agreement that paved the way for the accession of important developing countries.²⁷ Without a specific competence, the CoP of CITES has, over time, adopted various law-making decisions, including the introduction of quota systems for various animal products such as ivory,²⁸ which are apparently intended to formally commit the member states.²⁹ The regulatory approach of the Basel Convention on the transboundary movement of hazardous wastes was first thoroughly changed by a CoP decision that replaced the original system of prior informed consent by a ban of exports of hazardous wastes from OECD countries to non-OECD countries.³⁰ Similarly, the Executive Body of the CLRTAP bridged a gap in the first SO₂-Protocol that committed the parties to reduce their sulphur dioxide emissions by at least 30 percent by 1993, but did not address the period after 1993. The Executive Body “noted a common understanding among the Parties”³¹ that an increase in such emissions after 1993 would be inconsistent with the Protocol.

Delegated (Administrative) Decisions and Special Procedures

Secondary decision-making does not necessarily have to involve all parties to a treaty system; it may also envisage delegation of decision-making competencies to committees or more complex decision-making arrangements. Acceptance of resulting decisions does not rely on the consent of all parties to their precise content, but rather on the legitimacy of the procedural arrangement. Decisions to classify endangered species of flora and fauna under CITES are

²⁴ Benedick 1998, 90.

²⁵ Decisions IV/18 and IV/5.

²⁶ Yamin and Depledge 2004.

²⁷ Benedick 1998, 188–90. The size of the Fund was US\$160–240 million for a three-year period.

²⁸ Sands 2003, 513–14.

²⁹ See Sand 1997.

³⁰ Some member states, however, disputed the legal force of this decision. Therefore, the CoP adopted at a later session an amendment to the Convention, which is not yet in force; see Decision II/12 (1994) and Decision III/1 (1995).

³¹ See report of the seventh session of the Executive Body, ECE/EB.AIR/20, para. 22.

guided by extensive criteria and pass through a multi-tier procedure.³² Under the Montreal Protocol, decisions on funding are based upon comparatively well-defined criteria and assigned to an Executive Board composed of a limited number of state representatives.³³ And under the Kyoto Protocol's CDM, which allows developed countries to obtain certified emission reduction credits from projects located within developing countries, project approval is assigned to an independent committee that is accountable to the Protocol's MoP but protected from immediate intervention into case specific decisions.

Such arrangements are usually designed to ensure rule-based decision-making and to transform power-based bargaining into reason-based arguing.³⁴ They establish specific institutional constraints and rely on a division of labor that separates two decision functions. During the elaboration of general decision criteria and procedures, stakeholders are at least partially hindered from acting according to their case-specific interests, because these rules and procedures apply to numerous different and possibly still unknown cases – thus creating a consistency pull and a partial Rawlsian “veil of ignorance.” Under these conditions actors will tend to promote well-operating procedures and fair, that is, non-discriminating, substantive criteria. Case-specific decision-making, which is prone to interest-based bargaining and political maneuver, is in turn constrained by externally given criteria, so that rule-based arguments about the most appropriate option can prevail.

Gradual Emergence of a Quasi-legal Subsystem

International environmental regimes increasingly incorporate their own internal mechanisms of norm interpretation and compliance.³⁵ Starting with the Montreal Protocol, numerous environmental regimes adopted so-called “compliance procedures,” including the Basel Convention, the Kyoto Protocol, and the CLRTAP. Typically, such procedures include a compliance committee attended by a limited number of (legal) experts or state representatives acting in a personal capacity. Their primary task is the assessment of alleged cases of non-compliance. The final decision is usually taken by the relevant CoP, under the Kyoto Protocol even by the compliance committee. Procedures can typically be instigated by member states, which happens rarely, as well as by the regime's secretariat, which may become active not least upon information submitted by states and nonstate actors.

International environmental regimes also gradually develop their own internal sanctioning instruments to thwart “selective exit” of contracting parties from undesired obligations, so that compliance proceedings are not limited to blaming and shaming of non-compliant member states. Particularly relevant are privileges granted only under the condition that obligations are fulfilled. The “indicative list of measures” available in case of non-compliance with the Montreal Protocol includes, *inter alia*, the suspension of specific rights and privileges concerned with industrial rationalization, production, consumption, trade, transfer of technology, and financial mechanism.³⁶ The withdrawal of privileges granted under the Kyoto Protocol, including financial and technological assistance as well as the use of the so-called flexibility mechanisms (CDM, Joint Implementation, and emissions trading), might become a major sanctioning instrument of this treaty system in case of non-compliance.

³² Gehring and Ruffing 2008.

³³ Biermann 1997.

³⁴ Gehring and Plocher 2009.

³⁵ Klabbers 2007.

³⁶ Report of the Fourth Meeting of the Parties to the Montreal Protocol, Annex V.

Although compliance procedures are still quite different from court-like procedures, they create quasi-legal subsystems within the respective treaty systems. Compliance committees are not established to create yet other forums for intergovernmental bargaining. Rather, their task closely resembles that of courts, namely assessing state behavior in light of valid obligations and determining whether such behavior is in compliance with these obligations. Hence, they become technical bodies operating according to rule-based (legal), rather than power-based, criteria. As a consequence, regimes develop legal subsystems within their own organizational boundaries separately from the general arrangements of international law. Remarkably, traditional international procedures for the settlement of conflicts, such as conciliation, third-party arbitration, or adjudication, are not used at all in the context of environmental treaty systems, although being envisaged in several environmental treaties.

A Truth-based Subsystem Producing Collectively Accepted Scientific Knowledge

Most modern international environmental regimes comprise scientific and technological assessment apparatuses that are designed to actively shape widely accepted cognitive expectations on scientific or technological issues related to political action.³⁷ If successful, collective assessment of contentious scientific and technological propositions produces a body of knowledge that is commonly accepted among relevant actors, because it has been scrutinized by multinational teams of experts. It also promises to accelerate policy-making because it allows the institutionalized process to start long before the nature of an environmental problem and the interests of possible contracting parties have become clear. In most cases, treaty systems do not conduct primary research, but evaluate available information. Under the CLRTAP, the European Monitoring and Evaluation Programme was established to assess the import-export budgets of certain air pollutants, beginning with sulphur dioxide, for all European member states, but was later employed to allocate emission targets to the member countries.³⁸ Under the Vienna Convention, existing information on the atmospheric chemistry of ozone depletion and the nature of ozone-depleting substances and their substitutes is regularly assessed.³⁹ The Intergovernmental Panel on Climate Change prepared the ground for the regulation of climate change and continues to serve as the informal scientific and technological branch of the climate change negotiations, despite its lack of a formal relationship to the Climate Change Convention.

Successful scientific and technological assessment separates two distinct functions from each other, namely the shaping of cognitive expectations on scientific and technological matters and the (subsequent) shaping of political consensus among the contracting parties. The assessment of scientific or technological knowledge is not designed to make, or replace, collective decisions on commitments, but to prepare them. If successful, such assessments shape common expectations about the relevance of the respective environmental problem and the availability of technical solutions. Whereas political decisions are founded upon interests in terms of costs and benefits, scientific and technological assessments generate reliable knowledge that helps shape preferences. Information that has been validated within the treaty system acquires the status of accepted evidence about the significance of an environmental problem, its sources, or the implications of available remedies. Even rational utility maximizers will be inclined to change their preferences, if they learn about additional implications of an

³⁷ Andresen et al. 2000.

³⁸ Churchill et al. 1995.

³⁹ Parson 2003.

environmental problem. And rejection of abatement measures cannot be justified by the lack of suitable substitutes any more, once the collective assessment process has revealed that such substitutes exist. Thus, scientific and technological assessment forces negotiators to choose between open pursuit of parochial interests and accommodation with the scientifically necessary and the technologically possible.

Core Properties of International Environmental Treaty Systems

Can we identify core properties that help understand the nature of international environmental treaty systems as a specific type of international organization and the specific way in which they contribute to international environmental governance? Assuming that their basic function is the making of collectively binding decisions, I address in this section briefly four such core properties, namely their dynamics, their autonomy from member states and their interests, their constitutionalization, and their actor capacity.

First, international environmental institutions are inherently dynamic.⁴⁰ In contrast to basically stable institutions, say border treaties, their organizational apparatus is *intended* to accelerate the dynamics of collective decision-making. Their various decision-making units, including the CoPs, technical, preparatory and compliance committees as well as technological and scientific assessment panels, continuously review past decisions; and they prepare and adopt new decisions in their respective fields of competence. The establishment of impressive organizational machinery under some framework conventions even in the absence of substantive obligations emphasizes the importance that relevant actors attribute to the process component.

Dynamic institutions change their internal selection programmes continuously. Organizational structure provides the criteria for distinguishing internally relevant information from noise. Every organizational decision changes these criteria and modifies the internal selection programme. Adjustment of an organization's boundaries, for example, admittance of new member states or inclusion of new topics in the agenda, affects the relevance of related signals for the internal decision process. Substantive decisions change the opportunities for relating meaningful statements to the existing structure. Hence, adoption of a particular set of substantive obligations renders non-compliance proceedings meaningful, whereas subsequent statements deploring the scope of such obligations will usually be treated as noise. Accordingly, international environmental regimes amount to cybernetic non-trivial machines. Unlike trivial machines or simple input–output systems, which process the same input always in the same way, they change their internal selection programmes with every operation. Even if they were fully determined, it would hardly be possible to predict their output without knowledge of their internal selection programmes.

The set of social norms indicating collectively desired behavior also develops permanently. Whereas cooperation/regime theory treats normative development as a sequence of grand bargains, frequently reflected in the adoption of new treaties, with relative stability in between, normative expectations change with every relevant organizational decision.⁴¹ While the main body of the CITES treaty is relatively stable, only the numerous subsequent decisions, adopted by the CoP at its regular meetings, indicate which species of flora and fauna are considered as being endangered and require protection. While the Kyoto Protocol spells out reduction targets for member states, their precise meaning is defined in numerous subsequent decisions,

⁴⁰ Gehring 1994; and Young 2010.

⁴¹ Brunneé 2002.

determining, for example, allowances for sinks of carbon dioxide and the eligibility CDM projects located in states without reduction targets. And these eligibility criteria develop continuously through practices of accepting or rejecting such projects. Since actors can postpone decisions to later stages of the governance process and resort to incomplete contracting, the two levels of norm molding, related to treaties and secondary decisions, become – to some degree – functional equivalents. Actors choose the level at which they will deal with a given problem. Decisions will generally gain *de facto* binding force within a particular regime irrespective of their precise legal status, if commitment is intended by the community of member states. Even more, the contracting parties frequently avoid determining the precise legal status of secondary decisions, because principled discussion might jeopardize the successful reliance on low-key decisions as a means of governance that is more flexible than regular treaty law and at the same time able to commit the member states more intensely than mere recommendations.

Second, international environmental institutions gain autonomy from their member states, even though they are established and maintained by these states in pursuit of their individual and collective interests.⁴² They not only constitute separate entities of IR that are capable of processing information and of producing social norms. They also exert influence on the content of organizational decisions by setting up specific opportunity structures that constrain actors' choice. It matters whether an international policy to combat global climate change emerges spontaneously from non-communicative interaction among relevant actors, or whether it is the result of organized collective decision-making within an international institution. This difference depicts the extent of organizational influence in light of a given external structure of actors, their power, and their interests.

Organizational autonomy will increase with the internal complexity of the decision-making apparatus. While a simple intergovernmental negotiation system gathering the major actors of an issue area will largely reflect the external structure of power and interest and thus gain only limited autonomy, complex organizations with functionally specialized subunits that may also involve nonstate actors modify the decision process significantly and thereby affect its outcome. Administrative decision processes relying on criteria, quasi-legal subsystems, as well as scientific and technological assessment panels push the decision process from power-based bargaining toward criteria-based arguing.⁴³ If criteria are set appropriately, results will generally be more convincing, or problem adequate, than bargaining outcomes because they do not predominantly rely on parochial interests and distributive effects.⁴⁴ This does not mean that ensuing substantive obligations relinquish political consent by the contracting parties. While its specialized subsystems operate at arm's length from the member states and their immediate short-term interests, the treaty system at large remains under their collective control.

Third, international environmental regimes are subject to constitutionalization. Like any other organization, they operate according to their internal constitutions, which define their memberships and mandates, composition and competences of their organs, as well as basic decision rules.⁴⁵ Power is allocated to actors by the organizational constitution in the form of, for example, voting and participation rights, because external power resources, such as economic or military capability or pollution capacity, are not immediately transferable to the

⁴² Koch 2009.

⁴³ On the difference, see Risse 2000.

⁴⁴ Gehring and Plocher 2009.

⁴⁵ Coleman 1990, 325–70.

conference room. However, an organizational constitution can be designed so as to reproduce the external distribution of power as closely as possible, for example through weighted voting. Alternatively, it may change external power relations by empowering externally weak actors, for example, through the one-country–one-vote principle. The internal constitution defines the rules of the game that have to be accepted, even if disliked, as long as actors operate within the organization.

The constitutions of international environmental regimes allocate a specific status to the member states, but they also empower numerous actors of other types. Despite a continuing process of transnationalization, only states (but not always all states!) can become full members of virtually all important environmental regimes and enter into the related contractual obligations. Likewise, only member states control votes in the CoPs as the highest decision-making bodies of environmental regimes. However, numerous functionally specialized decision-making processes are attended by other types of actors. Some scientific assessment panels comprise independent experts, or experts nominated by states and nongovernmental organizations alike. Nonstate actors may have a right to participate in, and address, technical committees and even CoPs of environmental regimes. Secretariats frequently have the right to instigate non-compliance proceedings and may act upon submissions by states and nonstate actors alike. CDM decisions are even open for comments by the broader public. Whereas participating rights increasingly expand the range of relevant actors, they are usually highly selectively assigned to specific actors and limited to specific activities. Thus, they do not undermine the member states' role of establishing and maintaining the respective treaty systems altogether.

Fourth, international environmental treaty systems acquire the capacity to act as corporate actors.⁴⁶ Action generally relates to the power of creating effects outside an organization's boundaries. Environmental treaty systems are in control of specific resources that can be employed to cause such effects. Some treaty systems affect their environments by deciding to raise, and subsequently release, funds for environmentally beneficial projects. The most important resource of regulatory organizations is control over collectively accepted binding norms that indicate socially desired behavior in a given issue area. Although individual states and nonstate actors can seek to influence their content, collective acceptance of such norms is the product of a collective (organizational) decision process. Once accepted, social norms create opportunity structures that change the action situation of individual addressees beyond the conference room, because they indicate what other relevant actors expect from them. While a treaty system cannot force its addressees to comply, it changes the payoff of these options. Moreover, environmental treaty systems increasingly decide in collectively accepted ways whether a given behavior was in compliance with valid obligations or not and thus acquire control of another resource. Finally, they grant privileges, such as participation in emissions trading under the Kyoto Protocol, and can (threaten to) withdraw such privileges in case of non-compliance. Action of environmental treaty systems, like that of any other corporate actor, is thus always based upon intra-organizational decisions that are attributed to the organization and *may* have external effects.

Action of international environmental treaty systems is largely, but not entirely, directed at their member states. These actors are the typical addressees of behavioral prescription and proscriptions, because treaty systems are primarily established to organize, develop, and

⁴⁶ See generally, Coleman 1974.

stabilize cooperation among their constituent members. Activities of a treaty system *vis-à-vis* its member states is external action, because the institution constitutes a separate entity of international relations distinct from its member states. However, environmental treaty systems may also act *vis-à-vis* other types of actors. In some cases, they seek to influence non-member states – frequently with a view to motivating them to obey its obligations or join the system. Hence, trade restrictions under CITES and under the Montreal Protocol extend to non-members of the respective treaty systems. The Montreal Protocol's MoP may lift such restrictions, if a non-member state proves that it complies with regime obligations as if it were a member state. External action may even be directly addressed at nonstate actors. Under the Kyoto Protocol, private actors may apply for CDM projects, so that approval (or non-approval) decisions amount to action *vis-à-vis* these actors.

Conclusion

Modern international environmental treaty systems are organizations in a sociological sense, although many of them lack the formal status of international organizations. Their basic functions and activities do not dramatically differ from those of full-fledged international organizations such as the United Nations or the World Trade Organization. We can readily examine their specific contribution to international environmental governance only if we conceptualize them as organizations. If we do so, attention is drawn to the process of intra-organizational decision-making and norm molding, on which much empirical research already focuses. Sets of norms ("regimes") are still important, but they turn out to be the result of intra-organizational decision processes – as opposed to extra-organizational interaction among the major actors within a given issue area. It remains to be examined, how important organization decision-making is compared to the extra-organizational structure made up of actors, their interests, and the distribution of power among them.

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5 Climate regime design, the global warming potential, and climate risk management

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In the 2009 Copenhagen Accord the international political community agreed that “deep cuts in global emissions are required ... with a view to reduce global emissions so as to hold the increase in global temperature below 2 degrees Celsius” (Art. 2). Given the failure, on the part of the international political community, to develop greenhouse gas (GHG) emissions reduction plans that correspond to this goal, some might question the sincerity of state leaders in committing to this accord. This chapter, however, addresses another aspect of the 2°C target: even if the signatories wanted to pursue the goal that they have agreed to, the current implementation framework for international climate policy would restrict their ability to do so.

Under the Kyoto Protocol, parties can trade-off larger reductions in some GHGs against smaller reductions in others. The difficulty with this design is that the GHGs that are eligible for the trade-off have very different characteristics, particularly with regard to atmospheric lifetimes or adjustment times. At present, there is no single emissions metric that can adequately deal with this variation. Thus, the flexibility of the solution design model that currently guides international climate policy comes at the expense of the precision and specificity that are required to address climate impacts. This chapter first explains how the features of emissions metrics determine decision-makers’ ability to manage the risks associated with climate change. It then describes two potential means of dealing with the metrics problem: (i) developing alternative emissions metrics and (ii) developing alternative solution design models for international climate policy. A final section concludes.

The Solution Design Model of the Current Climate Regime

While CO₂ is the most important anthropogenic GHG, it is just one of a set of components that contribute directly and/or indirectly to climate change. Article 3.3 of the United Nations Framework Convention on Climate Change (UNFCCC) states that policies and measures to address climate change shall, in principle, be “comprehensive.” Article 3.1 of the Kyoto Protocol renders this principle operative by stating that parties “shall, individually or jointly, ensure that their aggregate anthropogenic carbon dioxide equivalent emissions of the greenhouse gases listed in Annex A do not exceed their assigned amounts.”

Thus, flexibility is key to the model currently guiding international climate policy. In practical terms, the flexibility is achieved through what is known as a “single basket” approach: there are six different GHGs in the basket, and parties are free to choose (i) *which* GHG emissions they want to reduce (of the six GHGs covered by the agreement) and (ii) *where* they want to undertake the reductions (in terms of geographic location).

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The Global Warming Potential (GWP) is a metric that transforms GHG emissions into “CO₂ equivalents” according to specified time horizons and enables decision-makers, in principle, to measure the climate impact of the six GHGs on a common scale. This common scale allows decision-makers to trade-off larger reductions in some GHGs against smaller reductions in others. The design enables parties to implement emissions reductions where they are least costly; many saw this level of flexibility as a necessary condition for ensuring that the Protocol would enter into force. The ultimate effectiveness of the current model, however, rests largely on the capacity of the GWP to deal with the variations in the atmospheric lifetimes (and forcing strength) of the six GHGs in the Kyoto basket.

The Shortcomings of the GWP

The current climate regime requires an emissions metric that “designates relative weights of the emissions of various components [that is, GHGs] according to their climate effects.”² The GWP was presented to the international political community in the First Assessment Report, which was issued in 1990 by the Intergovernmental Panel on Climate Change (IPCC). According to Skodvin and Fuglestad,³ the GWP is a tool “to compare the potential of the various well-mixed source gases to affect climate.” Because the GWP “expresses the climate effect of a gas compared to that of a reference gas” (CO₂), it is a “relative measure.” The GWP “is derived from the globally averaged net radiative fluxes at the tropopause, and it describes the effect on the global surface-troposphere system. It expresses the cumulative radiative effect of the gases over a chosen time horizon (usually 20, 100 or 500 years) relative to that of the reference gas, CO₂. The GWP for a gas multiplied by the emission of the gas gives this emission as ‘CO₂ equivalents’.”⁴

While the GWP adopted in the Kyoto agreement calculates CO₂ equivalents on a 100-year time horizon (Decision 2/CP.3, para. 3), the atmospheric lifetimes of the GHGs in the Kyoto basket vary considerably. For example, CO₂ has an atmospheric adjustment time in the order of centuries to decades whereas the atmospheric lifetimes of CH₄, N₂O, and SF₆ are approximately 12, 114, and 3,200 years, respectively. Thus, while GHG emissions may be “CO₂ equivalent” (in terms of integrated radiative forcing) in the course of a 100-year time horizon, they are *not* CO₂ equivalent over a 20- or a 500-year horizon.

Because the composition of the GHG emissions that are subject to reduction is left to the discretion of national policy-makers, the ultimate impact of the Kyoto agreement – or any other control regime molded on the same design – on mean global temperature depends on the aggregate effect of implementation choices made at the domestic level. Since no one can know precisely what choices will be made – and which GHGs will actually be reduced – decision-makers cannot fine-tune their policies to achieve specific climate impacts. One of the major concerns associated with the current method is the trade-off between short-lived and long-lived GHGs. With reference to this trade-off, Daniel et al. conclude that “the choice of the 100-year GWP leads to an underestimate of the relative potential impact of CH₄ in the short-term and of CO₂ in the long-term.”⁵

It is worth noting that when the GWP was first introduced, IPCC scientists warned of the shortcomings associated with the approach: “It must be stressed that there is no universally

² Tanaka et al. 2010, 191.

³ Skodvin and Fuglestad 1997, 355.

⁴ Skodvin and Fuglestad 1997, 355.

⁵ Daniel et al. 2011, 7.

accepted methodology for combining all relevant factors into a single [metric] ... A simple approach [that is, the GWP] has been adopted here to illustrate the difficulties inherent in the concept.”⁶ Yet, more than 20 years later, the GWP₁₀₀ is still being used to calculate “CO₂ equivalents.”

Implications for Climate Risk Management

Risk is defined as “the probability of an outcome multiplied by the severity of its consequences.”⁷ Risk management “endeavours to reduce the probability of an outcome, the potential severity of its consequences, or both.”⁸ The risks associated with climate change are primarily linked to the composition and total amount of GHGs emitted, and the rate at which GHG concentrations increase.⁹

The “ultimate objective” of international climate policy, as stated in Article 2 of the UNFCCC, is the prevention of “dangerous anthropogenic interference with the climate system.” Numerous studies have attempted to determine what constitutes “dangerous anthropogenic interference,”¹⁰ but there are no political agreements to guide interpretation of this objective.¹¹ However, a main focus in the political debate seems to be the *magnitude* (level) of temperature change: that is, the total amount of GHGs emitted into the atmosphere. In 1996, for instance, the Council of Ministers in the European Union agreed that “global average temperatures should not exceed 2 degrees [Celsius] above pre-industrial level and that therefore concentration levels lower than 550 ppm [that is, parts per million] CO₂ should guide global limitation and reduction efforts....”¹² This interpretation seems to have gained some traction, as reflected in Article 2 of the Copenhagen Accord (cited above), which was further strengthened at the 2010 Cancun meeting of the Conference of the Parties to the UNFCCC (Decision 1/CP.16, Art. 4).

While climate change is often implicitly assumed to be a smooth and gradual process, there is a risk that once certain critical limits are exceeded, “non-linear processes” could “cause a system to shift from one major state to another.”¹³ Further, the resulting systemic change may be irreversible, even if concentrations subsequently return to previous levels. This risk is reflected in “overshoot scenarios,” in which a target temperature is exceeded “for a short period of time as a result of the climate system inertia, before eventually returning to the target level.”¹⁴ Schneider et al. find that “overshoot scenarios induce higher transient temperature increases, increasing the probability of temporary or permanent exceedence of thresholds for key vulnerabilities or DAI [that is, dangerous anthropogenic interference].”¹⁵ Thus, to the extent that there are thresholds in the climate system, the *rate* of change is important: even if the ultimate magnitude of change is restricted, the rate of change may cause irreversible systemic shifts.

If the risks of climate change are linked not only to the magnitude but also to the rate of change, how appropriate is the GWP for managing these risks? The risks associated with

⁶ IPCC First Assessment Report, cited in Shine 2009, 467; the bracketed material was inserted by Shine for clarity.

⁷ Mabey et al. 2011, 51.

⁸ Mabey et al. 2011, 51; see also Carter et al. 2007.

⁹ In addition, the implementation of air quality measures implies that the cooling effect of aerosols is removed.

¹⁰ See, for example, Parry et al. 2007 for a review.

¹¹ Victor argues that “efforts to build an international regime to control climate change on a shared ‘objective’ are likely to fail because countries in fact do not have shared assessments of the danger and opportunities” (2007, 137).

¹² 1939th Council meeting in 1996, cited in European Commission 2005, 5.

¹³ Schneider et al. 2007, 784.

¹⁴ Rive et al. 2007, 378.

¹⁵ Schneider et al. 2007, 802.

climate change operate at different time scales. While a long-term perspective would be appropriate to target the magnitude of change, a short-term perspective would be appropriate to target the rate at which atmospheric GHG concentrations increase and the climate system changes. Since the choice of time horizon affects the relative weights assigned to short-lived versus long-lived GHGs – and, hence, the composition of GHG emissions reductions, “it may be expected that this choice [that is, the choice of a time horizon] has significant implications for the composition of the emission reductions and further on the resulting climate impacts.”¹⁶

Ideally, policy-makers should base their choice of time horizon on the climate impacts they regard as being of greatest concern (and, hence, which policy goals they wish to pursue). If they are concerned with abrupt, nonlinear changes or with the rate of change, they should adopt a short time horizon (for example, 20 years). But if they are concerned about the ultimate magnitude of change, they should adopt a longer time horizon. With a 100-year time horizon, there is a risk that climate impacts occurring on a short time horizon (that is, those that are linked to the rate of change) will be underestimated. Correspondingly, with a 20-year time horizon, there is a risk that long-term impacts (that is, those that are linked to the magnitude of change) will be underestimated. These effects are illustrated by Fuglestvedt et al.¹⁷ Modeling emissions reductions that are identical when expressed as CO₂ equivalents, Fuglestvedt et al. explore the temperature response when the reduction is implemented by reducing CH₄ (methane) instead of CO₂. They find that reductions in methane emissions will have more significant impacts on short-term temperature change than reductions in CO₂, which give a strong long-term effect. Thus, while meeting the reduction targets in “CO₂ equivalents” through CH₄ will reduce near-term warming, it will (relative to the CO₂ reduction case) also give more warming in the long term since less reduction in CO₂ is required. How the set of measures are composed and which gases are reduced, therefore, will have an effect on how the implemented climate policy will affect the trajectory of future temperatures.¹⁸

Daniel et al. conclude that “it is now recognized that no single emission metric can accurately quantify the climate impacts of the Kyoto gases on all time scales owing to the differences in the atmospheric lifetimes of the gases.”¹⁹ The implication of such findings is, first, that the current metric (the GWP₁₀₀) is inappropriate for the policy goal that currently is being pursued (the 2°C target). Second, and more generally, these findings point to the relationship between emissions metrics and policy goals and strongly suggest that policy-makers need to choose emissions metric according to the policy goals they want to pursue. In this sense, policy-makers’ ability to manage the whole spectrum of risks associated with climate change within the current international climate policy framework is restricted. It could be argued that as we approach potentially critical levels, at which either the rate or the magnitude of change carries the risk of setting off systemic changes, the more important it is to have fine-tuned policy instruments capable of preventing the most severe impacts. As time passes, the combined effects of two factors – the flexible solution design model and an emissions metric that is inappropriate for dealing with the challenges associated with this approach – become all the more alarming.

At least two strategies may offer hope of addressing the drawbacks of the current climate regime. First, the GWP can be replaced by a new emissions metric that better accommodates

¹⁶ Fuglestvedt et al. 2003, 292.

¹⁷ Fuglestvedt et al. 2003.

¹⁸ Fuglestvedt et al. 2003, 298.

¹⁹ Daniel et al. 2011, 4.

the policy goal. Second, the regime can be redesigned to improve policy-makers' ability to target multiple risks.

Alternative Metrics

Economists and physical scientists have been engaged in debate about emissions metrics since the early 1990s.²⁰ Curiously, these two research communities seem to have explored alternative metrics independently, with little dialogue across disciplinary boundaries.²¹ Since the GWP has significant implications for how countries' GHG emissions are measured, the metric has become the focus of increasing concern in some countries. In its Second National Communication to the UNFCCC, Brazil made its point of view on the GWP abundantly clear:

The Brazilian government objects to the use of the Global Warming Potential – GWP for the comparison of greenhouse gases. ... In Brazil's view, the GWP does not adequately represent the relative contribution of the various greenhouse gases to climate change. Its use would overemphasize and erroneously stress the importance of greenhouse gases that remain in the atmosphere for only short periods of time, such as methane.²²

Comparing the GWP with an alternative metric – the Global Temperature change Potential (GTP) – Shine finds that “if you happen to be a country with significant methane emissions, the effect of using either the GWP or the GTP on overall CO₂-equivalent emissions is stark.”²³ Using the GWP₁₀₀, Shine found that Brazil's 1994 methane emissions were 110 percent of its CO₂ emissions, and that New Zealand's 2006 methane emissions were 90 percent of its CO₂ emissions. Using the GTP₁₀₀, however, Shine found that the figures would have been 15 and 17 percent, respectively.²⁴

In September 2008, the UNFCCC issued a request to the IPCC soliciting “further technical assessment of alternative common metrics which are used to calculate CO₂ equivalence of anthropogenic emissions.”²⁵ In March 2009, the IPCC convened an expert meeting to address the UNFCCC request. In addition to summarizing the main shortcomings of the GWP, the meeting also emphasized the need to see the choice of emissions metric in relation to the policy goal in focus:

The GWP was not designed with a particular policy goal in mind. Depending on the specific policy goal or goals, alternative metrics may be preferable. ... The numerical value of the GWP can depend markedly on the choice of time horizon. The choice of any particular time horizon involves value judgements in terms of future commitment to radiative forcing. Timely information on potential future policy goals would facilitate research on alternative metrics.²⁶

Alternative Climate Regime Designs

The GWP paved the way for the flexible mechanisms of the Kyoto Protocol. Joint Implementation (JI), the Clean Development Mechanism (CDM), and Emissions Trading (ET)

²⁰ For overviews of alternative metrics see, for example, Fuglestedt et al. 2003, 2010; Shine et al. 2005, 2007; Tanaka et al. 2010.

²¹ See, for example, Fuglestedt et al. 2003; Godal 2003; and Shine 2009.

²² Brazil 2010.

²³ Shine 2009, 469.

²⁴ Shine 2009, 469.

²⁵ Plattner et al. 2009, vii.

²⁶ Plattner et al. 2009, 1.

all allow parties to implement their Kyoto commitments beyond their national borders.²⁷ Many observers view the flexible mechanisms (particularly CDM and ET) as essential to the political feasibility of international climate policy.²⁸ Despite its (alleged) political feasibility, however, the design has yielded little: more than a decade after the Protocol was signed, international negotiations have yet to establish a more ambitious international climate agreement capable of mobilizing support from major emitters of GHGs. The failure of the international political community to develop an effective international climate regime has set off a vigorous debate among political scientists and other policy analysts on “architectures” for more effective climate agreements.²⁹ Curiously absent from such discussions, however, are the challenges associated with the single-basket approach and emissions metrics.

The single-basket approach reflects the principle of comprehensiveness that is embedded in the UNFCCC, but it is not the only way to honor that principle. One alternative is a gas-by-gas approach, in which all of the principal GHGs would be addressed by separate agreements or regulations that, taken together, would yield a comprehensive regime. Victor, in effect, argues for a gas-by-gas approach implemented gradually.³⁰ His concern, however, is not the metrics problem, but the problem of monitoring and enforcing a multi-gas approach. Since monitoring of CO₂ emitted from fossil fuels would not be a problem, he suggests that an ET system initially should be restricted to CO₂ emitted from fossil fuels, but that the regime could be expanded to a multi-gas approach over time:

It is likely that the need for a multisource and multigas “comprehensive” approach will be small in the near future but will grow in importance as regulation of greenhouse gases tightens. Until then, the best approach is to sponsor serious technical work on multigas monitoring, collect baseline emission data for multiple gases, and to explore the tradeoffs between single- and multiple-gas regulatory instruments, rather than to attempt to associate valuable emission credits with poorly monitored emissions.³¹

From the point of view of climate risk management, however, a challenge in Victor’s proposed design would be that emissions of GHGs with long atmospheric lifetimes, such as N₂O and SF₆, initially would remain unregulated. Even if their contribution is currently small, their atmospheric lifetimes mean that today’s emissions will affect the global climate for a very long time.

Another alternative to the single-basket approach is a multi-basket approach, which would be made up of “agreements of several component groups.”³² A multi-basket approach was successfully adopted in the Montreal Protocol on ozone depletion. Ozone-depleting substances were regulated in groups, or separate baskets; trading was permitted within each basket, but not between different baskets.³³ It is easy to imagine a similar design for the climate regime. As suggested by Tanaka et al.,³⁴ a multi-basket approach could regulate short- and long-lived GHGs separately, while permitting trading within but not between baskets. A multi-basket approach that distinguishes between short- and long-lived GHGs would allow policy-makers more control over the composition of GHG emissions reductions:

²⁷ JI, CDM, and ET were adopted through Articles 6, 12, and 17, respectively, of the Kyoto Protocol.

²⁸ See, for example, Keohane and Raustiala 2008; for a contrary view, see Victor 2004, 2007.

²⁹ See, for example, Victor 2004; Aldy and Stavins 2007; and Keohane and Raustiala 2008.

³⁰ Victor 2004.

³¹ Victor 2004, 62–3.

³² Tanaka et al. 2010, 191.

³³ Daniel et al., 2011.

³⁴ Tanaka et al. 2010.

Several studies indicate that the most long-lived gases should be reduced first ... This will increase the benefit of these reductions since more of the response (in terms of concentrations and RF [that is, radiative forcing]) will happen within the chosen period. Short-lived gases, on the other hand, which respond quickly and have a shorter effect, should be reduced towards the end of the period.³⁵

On the one hand, this approach would restrict the flexibility of the parties' implementation of its commitments. On the other, a multi-basket approach offers a clear benefit: while a metric would still be needed to "compare the total reductions that the individual agreements [would] require ... the use of metrics would be lifted up from the *implementation* level to the *design* level in climate policy."³⁶ With this design, moreover, the cherished policy instrument of emissions trading would not have to be abandoned (although the trading would take place within, not between baskets).

Concluding Remarks

Even if policy-makers wanted to systematically pursue the goal of a 2°C maximum increase in global mean temperature, the current framework for international climate policy would restrict their ability to do so. Under the model that currently guides international climate policy, policy-makers can trade larger reductions in some GHGs for smaller ones in others – which means that policy-makers cannot control the composition of the GHGs that are reduced to pursue the 2°C target. In particular, the current regime allows trade-offs between short- and long-lived GHGs. Such trade-offs limit policy-makers' ability to manage the risks associated with climate change.

The drawbacks associated with the current design of the international climate regime can be addressed either by (i) replacing the emissions metric, the GWP₁₀₀, with an alternative metric that better accommodates the policy goals that are pursued or (ii) replacing Kyoto's single-basket approach with a gas-by-gas or multi-basket approach. Either of these approaches, however, would require renegotiation of fundamental features of the regime. The question is whether any redesign of the climate regime would be politically feasible. A key determinant of political feasibility is the interests of actors in veto positions at the domestic policy level.³⁷ Political feasibility would thus depend, *inter alia*, on the emissions profiles of such domestic actors (particularly in major economies) and the extent to which they could expect a net gain or a net loss from a redesigned approach.

Addressing the metrics problem requires both the political will to discuss alternative regime designs, and further analysis to develop alternatives to the GWP. Regarding the latter, the metrics problem bears witness, above all, to the need for an interdisciplinary approach to the climate problem that would include not only the physical sciences, but also the social sciences.³⁸ Physical scientists and economists are already engaging in the metrics debate. Political scientists and other policy analysts are called on to follow suit.

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³⁵ Fuglestad et al. 2003, 321.

³⁶ Fuglestad et al. 2010, 4649; emphasis added.

³⁷ See, for example, Skodvin et al. 2010; and Gullberg and Skodvin 2011.

³⁸ Shine 2009.

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6 The politics of persuasion: UN climate change negotiations

*Radoslav Dimitrov*¹

Friends, I do not ask my country or any country to suspend national interest but to advance it more intelligently. For nothing matters more to any nation's interest than the fate of the only world we have. ... To the developing world I say: the technology now exists to gain the dividends of a high-growth economy without incurring the damage of a high-carbon economy.²

What do governments say to each other during negotiations? Global environmental politics feature a high number of multilateral conferences in which countries negotiate collective policy responses to various ecological problems. Governments have held at least 78 global multilateral environmental conferences in addition to regional meetings and bilateral communication across borders.³ These conversations regularly produce policy agreements to combat ecological problems, including some of the strongest policy regimes in global governance. In the process of these interactions, countries occasionally reconsider their national interests and change their positions.

This chapter examines argumentation and techniques of persuasion in global environmental negotiations. It explores the micro-dynamics of international climate negotiations and the actual communicative exchange. Documenting the argumentation offered by delegations in support of their positions allows us to uncover the foundations of negotiating strategies and clarify how actors seek to persuade others. Preliminary findings presented here are based on participatory observation of UN climate negotiations between 2007 and 2010, interviews with negotiators and policy-makers, and document analysis of official delegation statements.⁴ My research assistants and I attended 12 negotiation conferences and recorded hundreds of hours of country statements.

Key Propositions

Several observations emerge. First, governments spend considerable efforts in persuading others rather than muscle their way through. They engage in purposeful communication aiming to reshape policy preferences in other countries. Quite simply, people try to change each other's minds and not merely policy behavior. Second, political actors use a variety of approaches to persuasion and a typology of arguments is outlined below. Third, some approaches to persuasion work better than others. Effective argumentation focuses on the interests of *other* countries. Shrewd negotiators formulate their own argumentation with a view to accommodating the interests of their target audience.

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² Gordon Brown, Prime Minister of the United Kingdom, speaking at the UN climate conference in Copenhagen, 15 December 2009.

³ Kimo Goree, Director of IISD Reporting Services, personal communication. See <http://www.iisd.ca/meetings/2010.html>.

⁴ The author attends the UNFCCC negotiations as government delegate for the European Union and Bulgaria.

A “Trojan horse” hypothesis advanced here is that countries seek to change national positions from within the camps of their rivals, by bringing information that reflects national interests abroad. Gentler than the warlike name would suggest, this approach relies on empathy: actors take their rivals’ interests seriously and deliver information on policy paths that would serve others’ national interests more effectively. Such “other-orientation” is an intelligent pursuit of the national interest by taking others’ interests seriously. This remarkable phenomenon challenges the prevalent assumption of national egoism in world affairs and therefore deserves further examination in international relations (IR) scholarship.

Finally, conversations and good arguments help change national policies. Today climate policy is rapidly gaining speed in many countries. A global pattern of national policies for low-carbon development today closely matches the European argument about the economic benefits of climate policy. The current global policy shift toward a clean economy reflects the European concept of “win–win” solutions to climate change.

Argumentation and Negotiations: The Missing Literature

Multilateral negotiations have been described as “a process of mutual persuasion and adjustment of interests and policies which aims at combining non-identical actor preferences into a single joint decision.”⁵ The process through which human communities make collective decisions in the governance of public affairs is shaped by many factors. The political process itself, however, is human communication: the exchange of messages and information between political actors. This most apparent and ubiquitous media of social interaction sometimes remains under the radar of IR scholars.

Governments talk but scholars rarely listen. Communication is rarely explored in the study of multilateral negotiations. There is an academic tendency to treat international politics as a series of strategic policy moves, hence our traditional focus on state “behavior” and action rather than words. Talk is cheap indeed (until you hire a lawyer) yet international relations occur through speech acts as well as policy actions. Listening to intergovernmental conversations is important and also interesting.

Despite the widespread recognition that “in essence, international negotiation is communication,”⁶ communication is the *terra incognita* of negotiation studies. Sweeping literature reviews conclude that the exchange of arguments is the least explored topic in this field of research.⁷ The negotiation literature is dominated by game theory which focuses on structural variables, downplays process and ignores what countries actually tell one another. Previous explorations of multilateral negotiations examine configurations of interests and changes in national positions,⁸ coalition building,⁹ the role of leadership,¹⁰ and the role of issue linkage.¹¹ Important books by Farhana Yamin and Joanna Depledge rectify the general neglect of process and provide detailed descriptions of the logistical and bureaucratic organization of climate negotiations but also leave out the discursive exchange among delegations.¹²

⁵ Rittberger 1998, 17.

⁶ Stein 1988, 222; and Sycara 1990.

⁷ Jönsson 2002; and Zartman 2002.

⁸ Andresen and Agrawala 2002; and Vogler and Bretherton 2006.

⁹ Hampson 1995; and Dupont 1996.

¹⁰ Young 1991; and Underdal 1994.

¹¹ Zartman 1994; and Hopmann 1996.

¹² Yamin and Depledge 2004; and Depledge 2005.

What do delegations actually say to one another? “The back-and-forth communication ... the dynamics of mutual persuasion attempts that we usually associate with negotiations are insufficiently caught.”¹³ Thomas Risse¹⁴ cogently argued the need to study communicative behavior, and the few scholars who tried to follow up admitted failure to produce conclusive results, partly due to a lack of verbatim records of negotiations.¹⁵ Scholars rarely have access to international negotiations, particularly behind closed doors. The research presented here explores the argumentative processes of policy deliberations through direct observation and primary data.

Global Climate Negotiations

Today governments are busy negotiating a new international policy agreement that will effectively replace the Kyoto Protocol as the centerpiece of the climate policy regime. The new treaty would likely strengthen climate policy through stringent emission reductions in advanced economies, concrete actions by developing countries, and international financial and technological support for climate policy. While the United Nations Framework Convention on Climate Change (UNFCCC) process is the main negotiation forum, multilateral discussions take place elsewhere including the Major Economies’ Forum on Energy and Climate Change, the G8, and the G20 annual meetings.

The formal UN process began in 2007 when countries launched the Bali Action Plan, a legal mandate for formal negotiations that requires governments to produce an agreement containing four building blocks: mitigation (read greenhouse gas (GHG) emissions reductions), adaptation (to the consequences of climate change), and financial and technological support for developing country actions.¹⁶ Two parallel processes of formal negotiations are currently underway. One aims at renegotiating emission reductions by industrialized countries under the Kyoto Protocol (the “Kyoto track” or AWG-KP). The second, “Convention track” (AWG-LCA) is a broader negotiation of global policy by all countries, including developing countries.

Comprehensive guides to the negotiations documenting the complex policy issues on the table and taking stock of progress have been published elsewhere.¹⁷ Countries disagree on the legal architecture of the future policy regime: whether to extend the Kyoto Protocol, create a new global agreement with obligations for all countries, or both. Other key debates are on the level of obligation for developing countries; long-term goals for temperature limits and global emission reductions; level and mechanisms of international funding; and the role of agriculture and forestry.

The stakes are uniquely high. Climate change is the only truly global problem whose grave consequences affect most human communities. The realities of global warming now accepted by the global political elite and the international scientific community threaten economic growth, long-term prosperity and the physical survival of human populations. Under a business-as-usual (BAU) scenario, climate change can reduce global GDP by 5 to 20 percent.¹⁸ Expected consequences include: decline in food production from disruption of agriculture; water scarcity; human health problems on epidemic scales; increase in the intensity and frequency of natural disasters; sea-level rise and inundation of agricultural lands; and refugee waves.¹⁹ To avoid the

¹³ Jönsson 2002, 224.

¹⁴ Risse 2000.

¹⁵ Deitelhoff and Müller 2005.

¹⁶ Clémençon 2008.

¹⁷ Kulovesi and Gutiérrez 2009; Dimitrov 2010; and Sterk et al. 2010.

¹⁸ Stern 2007.

¹⁹ IPCC 2008; and Schneider et al. 2010.

most catastrophic impacts and limit temperature rise to below 2°C, advanced economies would need to cut GHG emissions 25–40 percent by 2020, and global emissions need to be reduced 50–80 percent by 2050.

Global climate politics has rightfully attracted much academic attention. Insiders to the UN political process have provided valuable analytical summaries of global climate negotiations.²⁰ Many studies analyze existing climate agreements, evaluate progress in negotiations, and discuss future prospects for cooperation.²¹ Others explore the comparative politics of climate change, the national policies and negotiation positions of particular actors,²² and domestic social discourse within countries.²³ Another important body of literature debates future policy options, offers policy recommendations, and discusses issues of justice and equity.²⁴

Sixteen rounds of formal negotiations occurred between Bali 2007 and April 2011. Recently, countries reached two breakthrough agreements in Cancun, Mexico, in December 2010. The Cancun Agreements are historic because they set for the first time an official global goal of limiting temperature rise to below 2°C, and stipulate that developing countries “will” take nationally appropriate mitigation actions. Countries agreed on a bottom-up approach to emission reductions whereby each country determines voluntary national targets and actions and reports them internationally. The agreements also establish a global Adaptation Framework; an international registry for developing country policies; and a Green Climate Fund with \$30 billion dollars of short-term finance and a commitment to provide \$100 billion per year for climate mitigation and adaptation by 2020.²⁵ These interim nonbinding agreements presumably serve as a basis for a future legally binding treaty (or two) as countries continue to negotiate.

Positions of Key Players

The European Union

Clearly the global leader on climate policy, the EU advocates a strong global agreement with stringent economy-wide emissions reductions, substantial international financial support, and robust compliance mechanisms.²⁶ Europeans stress “win–win” solutions to climate change that benefit the economy and the environment:

European Union: Let us agree to the 2 degree objective and to global emissions reductions of at least 50% as well as aggregate developed emission reductions of at least 80–95% by 2050 compared to 1990 levels, and in the order of 30% by 2020. Developing countries as a group should commit to actions that achieve a substantial deviation below the currently predicted emissions growth rate in the order of 15–30%.²⁷

²⁰ Fry 2008; Kulovesi and Gutiérrez 2009; Dimitrov 2010; and Oberthür 2011.

²¹ Paterson 1996; Harris 2000; Ott 2001; Victor 2001; Betsill 2004; Yamin and Depledge 2004; Depledge 2006; Cléménçon 2008; Ott et al. 2008; and Watanabe et al. 2008.

²² Hovi et al. 2003; Harrison and Sundstrom 2007; and Oberthür and Kelly 2008.

²³ McCright and Dunlap 2003; Pettenger 2007; see also the special issue of *Global Environmental Politics* (November 2007).

²⁴ Gupta 2000; Agrawala and Andresen 2001; Aldy et al. 2003; Najam et al. 2003; Bodansky 2004; Victor 2004; Adger et al. 2006; Roberts and Parks 2007; Hare et al. 2010; and Müller 2011.

²⁵ The text of the Cancun Agreements are in documents FCCC/CP/2010/7/Add.1 and FCCC/Kyoto Protocol/CMP/2010/12/Add.1 available at http://unfccc.int/meetings/cop_16/items/5571.php, accessed 14 April 2011.

²⁶ Harris 2007; and Oberthür and Kelly 2008.

²⁷ EU opening statement at the AWG-LCA, delivered by Sweden, December 7, 2009. All quotations of statements by country delegations are primary data recorded by the author and his research assistants during the negotiations.

The EU frequently shows flexibility and deferred to developing countries' insistence on the continuation of the Kyoto Protocol, provided there are reciprocal binding obligations in the developing world under a separate agreement. Bent on strong ecological results, Western Europe is pressing Eastern European members to forsake surplus emission reductions and adopt brand new pledges in the post-2012 period. On international finance, Europe has the most elaborate position among industrialized countries and the European Council decided to provide €2–15 billion per year by 2020.

The Umbrella Group

The Umbrella Group consists of Australia, Canada, Iceland, Japan, Kazakhstan, New Zealand, Norway, the Russian Federation, the Ukraine, and the United States who seek to coordinate positions and deliver common statements. Three countries in particular oppose the continuation of the Kyoto Protocol and insist on a single global treaty that ensures actions by all major emitters. Their opening statement in Copenhagen 2009, delivered by Australia, summarized the group's preferences:

Our vision is simple: we recognize the scientific view that the increase in global average temperature above pre-industrial levels ought not to exceed 2 degrees Celsius. We want a global outcome that puts the world on a path to 50 percent reduction in emissions by 2050, and peaking emissions as soon as possible. We want all countries to act according to their national ability.

The United States, after having stayed out of the climate regime during the Bush years, changed course in 2009 and now seeks a comprehensive global agreement involving all countries, reliance on market mechanisms and existing global financial institutions, low-carbon technology research and development and a global "climate technology hub" for exchange of information on clean technologies. The US cannot participate in renegotiating the Kyoto Protocol because it has not ratified the Protocol, and negotiates only in the AWG-LCA track.

Japan

Japan made a dramatic U-turn in September 2009 when the Hatoyama government announced plans to reduce its own emissions by 25 percent below 1990 levels by 2020, contingent on a global policy framework involving all major economies. Japan favors "sectoral approaches" to emission reductions, that is, international agreement to target particular economic sectors and thus allay competitiveness concerns for those sectors. The Japanese are strongly against Kyoto 2 but appear committed to creating an ambitious new treaty and generally play a constructive role in the talks. At Copenhagen they provided \$11 billion of public funding for international policy, and the head of their delegation spoke earnestly and passionately during the imbroglio over adopting the Copenhagen Accord in 2009:

Japan: We are here neither to accuse each other nor to blame each other. We are here assembled to do our utmost to save the Earth. It is shameful of ourselves condemning each other. The whole world is watching us. Our delegation has grave concerns on the life and death threat facing small islands, vulnerable countries on the surface of the Earth. We are here not just to save these nations but also to save ourselves, our children and our future generation.

The Russian Federation

The Russian Federation is generally uninvolved in debates and rarely speaks in the discussions. They advocate voluntary bottom-up approaches that allow each country to determine so-called

“no-lose” targets whose achievement would bring rewards but wherein non-compliance brings no penalties. Domestically, Russia is currently considering national emission reduction goals.

Developing Countries

Developing countries negotiate as a coalition, “the G77 and China.”²⁸ They are united in advocating Kyoto 2 with stringent binding policy in the North, voluntary policy in the South, substantial international financial and technological support, and no international reporting of policies that are unsupported internationally. The G77 demand firm legal obligations for developed economies *before* making any policy commitments themselves, and decry demands for a global treaty as attempts by industrialized nations to “destroy Kyoto” and shun their historical responsibility for global warming. Delivering a formal opening statement on behalf of the coalition, Sudan stated:

G77/China: We reject attempts of developed countries to shift the responsibility of addressing climate change and its adverse effects on developing countries, and we equally object to their objective of concluding another legally-binding instrument that would put together the obligations of developed countries under the KP and similar action of actions of developing countries. This would revoke the principle of “common, but differentiated responsibilities” and “historical responsibility” under the Convention.

The coalition is fractured by profound conflicts of interest among heavy industrial emitters such as China and India, forested countries, fossil-dependent OPEC (Organization of Petroleum Exporting Countries) members, and the Alliance of Small Island States (AOSIS). These conflicting interests are deliberately suppressed for the sake of unity but they regularly ruptured the coalition.²⁹

China, India, Brazil, and South Africa (the BASIC Group)

The BASIC group are heavyweight GHG emitters with strong influence on the G77 coalition. Unlike other G77 members who emphasize international financial and technological support, money is not their priority: BASIC countries want freedom of national economic development unencumbered by legal treaty obligations. They insist their actions should be discussed *after* finalizing negotiations on developed country actions. Notably, all four appear positioned to take domestic action.

Indonesia, Congo, Brazil, and Other Heavily Forested Countries

These countries can reap considerable financial benefits from a global agreement rewarding forest conservation for the sake of climate change abatement. They carefully negotiate institutional arrangements and financial details and, given the right incentives, would break ranks with the G77 on the need for developing country actions. Saudi Arabia, on the other hand, seeks to obstruct negotiations in every possible way, engaging in diplomatic carpet-bombing of sorts. Heavy reliance on fossil fuels makes their economy extremely vulnerable to prospective energy efficiency and alternative energy policies. Their delegation champions discussions on negative consequences of climate policy and compensation for “spillover effects” of low-carbon development strategies in advanced economies.

²⁸ China is not a formal member but associates itself with the G77 and participates in their daily internal discussions.

²⁹ Vihma 2010.

The Alliance of Small Island States

AOSIS want action as strong and swift as possible, due to their extreme vulnerability to sea-level rise. Some of the most proactive players in the negotiations are in this group, with many innovative policy ideas and key substantive text proposals coming from Tuvalu and Micronesia. AOSIS advocate 45 percent emission cuts by 2020 and limiting global temperature increase to below 1.5°C. On the opening day of Copenhagen, Grenada stated:

Alliance of Small Island States: We have a moral imperative to act. All of us face this. But as small island states going under water, losing our territorial integrity, facing increased poverty, and frankly, given that our very survival is threatened, we stand to lose the most if nothing happens here.

Typology of Argumentation

Governments justify their negotiating positions by several principal types of arguments: pragmatic, moral, legal, procedural, and ideological. The pragmatic argument centers on effective problem solving. The moral arguments appeal to morality and a sense of justice. Procedural arguments are drawn to follow agreed upon mandates and fair process. Legal arguments refer to principles of international law and existing treaties. Finally, ideological argumentation goes outside the specifics of the policy problems at hand and focuses on overarching paradigms of socioeconomic development.

Pragmatic Arguments

Pragmatic arguments focus on problem solving. Delegations commonly argue that steep emission reductions are needed in order to combat climate change and reduce its negative impacts on human communities. A few typical examples of the countless statements made along these lines over the years of climate conferences:

Paraguay: Today we face the worse security crisis in the history of humanity. As long as developed countries continue to postpone the fulfillment of their obligations of emissions reduction commitments, the conditions for well-being and survival of billions of human beings will hang in the balance.

Samoa: Climate change is an issue of survival for Samoa and other low-lying islands – hence our support for a legally binding instrument to reflect the science under the two tracks with an effective and equitable compliance regime. This is not a political slogan to win over support or a campaign gimmick to enlist sympathy.

Climate change is real. We see and experience it everyday. Our coastlines have been eroded, our corals bleached, and salt water intrusion is affecting fresh water resources and crop cultivation along coastal areas. We have been forced to relocate populations and necessary infrastructure to higher grounds at very high costs, both financially and socially.³⁰

Many statements center on the effectiveness of various policy options. The US, the EU and others, for instance, stress market mechanisms as the most cost-effective and politically feasible policy approach.

Moral Arguments

Moral arguments are based on considerations of ethics and justice. During the 1990s, developing countries successfully argued they bear no policy responsibilities to mitigate climate

³⁰ Statements at the Fifteenth Conference of the Parties to the UNFCCC, Copenhagen, 7–19 December 2009.

change because the problem was created by industrialized countries. European countries accepted this as a fair argument and the resulting Kyoto Protocol exempted developing countries from emission reduction targets. Today the situation is somewhat different because half of current emissions originate in the developing world. Yet many use similar arguments related to climate justice:

Ethiopia: Every one of us knows that Africa has contributed virtually nothing to global warming but has been hit first and hardest. Africa is indeed paying with the misery and death of its people for the wealth and wellbeing that was created in the developed countries through carbon intensive development. That is fundamentally unjust.³¹

Solomon Islands: It is therefore morally and ethically correct for developed countries, with their historical responsibility [for climate change], to adopt a package that will reduce their collective GHG by more than 45 percent below 1990 levels by 2020 and 95 percent below 1990 levels by 2050. It is morally and ethically correct, to provide new, additional and predictable funding.³²

Legal Arguments

Legal arguments emphasize legal precedent and commitments under existing international agreements, including legal mandates. Developing countries press developed countries to carry the policy burden of reducing emissions by referring (again and again) to the principle of “common but differentiated responsibilities” established in the UNFCCC. In demanding international finance, they refer to the legal mandate of the Bali Action Plan to negotiate four building blocks including finance and technology transfer.

Paraguay: Industrial countries are not complying with the commitment to mitigate climate change, which not only violates the Convention, but also violates the basic principles of international environmental law, including the principle that stipulates that States have the obligation to not cause grave damages to the territories of other States.

Procedural Arguments

Sometimes countries successfully oppose substantive policy proposals and block entire draft agreements with objections on purely procedural grounds. When the 2009 Copenhagen conference ground to a halt, the organizers proposed establishing a small group of 25 heads of state to seek a breakthrough as an efficient alternative to the arduous task of reaching consensus among 192 delegations. This “Friends of the Chair” group was supported by most delegations and produced a draft Copenhagen Accord. The agreement was overturned by several small countries such as Sudan, Tuvalu, and Bolivia who argued that the decision-making on the Accord was not inclusive, violated the UNFCCC procedures of consensus building, and therefore the Accord was illegitimate. Cuba protested against “grave procedural violations,” the “antidemocratic approach,” and “arbitrary, exclusive, and discriminatory” debate formats.

Cuba: What you call, Mr. President, “a group of representative leaders” is a gross violation of sovereign equality that is enshrined in the Charter of the United Nations and a mechanism that would impose decisions on the international community.

³¹ Statement by Ethiopia on behalf of the African Group at the UN climate conference in Copenhagen, December 2009.

³² Statement of the Solomon Islands at the Copenhagen conference, December 2009.

Political Ideology

Political ideology is also evident in international debates. Bolivia and Venezuela portray capitalism as the root cause of climate change, and decry Western policy proposals as capitalist instruments of domination. In the limelight of global media, Hugo Chavez quipped “If the climate was a bank, the West would have saved it by now!”

Venezuela: Here, today, in this fateful hour, the imperial interests are being imposed, and this is really flying in the face of those who are the most vulnerable. ... Our dignity, Mr. President and Mr. Secretary General, does not have a price tag. We will not sell our principles ... even for 30 billion dollars.

Other Arguments

Finally, some statements feature a mixture of two or more types of arguments. Cuba, for instance, weaved the imperatives of problem solving and morality:

Cuba: [The agreement] must include a strong mechanism by developed nations for the financing of mitigation actions and especially for the adaption of developing countries to climate change. This is not a work of charity, but above all, a moral obligation to the countries of the South and it is a legal obligation deriving from the commitments assumed under the Convention.

The Winning Argument: The Trojan Horse Approach

A principal technique of persuasion that actors use is to alter perceived costs and benefits of action. Mainstream IR scholarship has established that countries use threats and sanctions to raise the *costs* of undesired political behavior. In climate negotiations, governments convince others also by raising the *benefits* of desired behavior. The EU and others have repeatedly emphasized the economic benefits of low-carbon development. Thus, European countries try to generate genuine national interests in the US and other countries in clean energy policy and a strong climate agreement. Delivery of information on the co-benefits of reducing emissions has been central in multilateral discussions.

One interesting finding is that some countries focus on the interests of *other* nations. To persuade others during negotiations, some states tailor their arguments to the interests of their target audience. Countries seek to take others in a particular policy direction by delivering information that reflects their rivals’ interests. This is a “Trojan horse” approach to argumentation because it seeks change from within the camps of other nations. Actors seek to affect their opponents’ policy preferences by molding their own arguments to their opponents’ concerns.

The EU, for instance, seeks strong climate action but emphasizes the *economic* reasons for environmental policy. Facing opposition by countries who fear how climate policy would affect their economy, the EU has been emphasizing the economic benefits of a low-carbon economy based on renewable energy and energy efficiency. Back in the early 2000s, Europe introduced the concept of “win–win solutions” to the international climate policy debate.

European Union: We think the industrialized countries need to take the lead. They need to make 30 percent cuts collectively by 2020 ... and 60–80 percent cuts by 2050. The EU is particularly encouraged by the broad range of mitigation potentials. A significant part is available at low or no cost and brings additional benefits for energy security and air pollution in what is referred to as “win–win” solutions.³³

³³ Statement at the Third Session of the Ad Hoc Working Group on Further Commitments for Annex I Parties to the Kyoto Protocol, Bonn, Germany, 7–18 May 2007.

Europeans tirelessly advertise co-benefits of climate policy including financial savings from energy efficiency and clean energy, competitive advantage and energy security – issues of key importance to the US and China. To persuade developing countries, they focus on priorities in those countries. The UK Prime Minister Gordon Brown addressed other heads of states in Copenhagen:

To the developed world I say: environmental action is the most powerful engine of job creation in an economy urgently in need of millions of new jobs. To the developing world I say: the technology now exists to gain the dividends of a high-growth economy without incurring the damage of a high-carbon economy.

Along this line, an EU joint statement sought to persuade developing countries to accept climate policy commitments by emphasizing the priority interests in the developing world:

We cannot tackle hunger, disease, and poverty unless we also provide people with a healthy ecosystem where economies can grow. Hunger, disease, and poverty will never be defeated in a world where global warming goes above 2 degrees Celsius. ... Let our Copenhagen Agreement be not just about restrictions and constraints – but about sustainable development, green growth and possibilities!³⁴

The essence of the European approach to persuasion was aptly captured in an opening statement by Denmark's Connie Hedegaard who presided over a December 2009 conference in Copenhagen:

We don't have to choose between economic growth and climate conservation. A global deal will drive job creation, a global deal will drive competitive advantage, a global deal will drive energy security. So ladies and gentlemen, let's get it done. ... Let's mark this meeting in history, let's open the door to the low-carbon age – let's get it done, and let's get it done now.

Shrewd argumentation helps others see compelling reasons for action and perceive self-interest in action. By contrast, not all negotiators use other-oriented arguments: many are self-centered in international discussions and repeat over and over their own needs and desires. Developing country statements, for instance, often reiterate their well-known demands for international financial and technical support. Repeating what you want others to do without offering them reasons for action is not a particularly effective negotiating strategy.

The Power of Persuasion

Dialogue in world politics matters as it exposes actors to new information and reasoning that helps them (re)consider their interests. While establishing a strict causal connection between particular arguments and state behavior would be premature at this early stage, the extensive global discussions on climate change over the last 10 years correlate with a global pattern of national policy developments. Information on the climate crisis and the European argument of “win-win” solutions have gained currency and many countries are taking serious action for emission reductions and clean energy.

This overall positive assessment must be preceded by two caveats that justify reservations about the role of persuasion in world politics. First, not all governments employ careful

³⁴ Statement by the European Union at the Fifteenth Conference of the Parties to the UNFCCC, Copenhagen, 7–19 December 2009.

argumentation or make genuine efforts at persuading others. In climate talks, many delegations simply reiterate their own positions and preferences over months and years of discussion. Occasionally entire conferences consist of lengthy reiterations of national positions that are already well known to all participants. Some do so without either offering justification for these particular preferences or integrating other interests in their own argumentation.

Second, persuasive arguments do not always, or perhaps even frequently, succeed in changing the minds of governments and their policy preferences. Intransigence is common and creates a chronic impasse in the UN climate talks. China, India, and Brazil were unbending between Bali 2007 and Copenhagen 2009, dismissed outright all suggestions for policy actions, and unapologetically trumpeted their freedom of economic development regardless of environmental impacts. In that time period, Western countries argued cogently and made considerable compromises yet received practically nothing in return from developing countries, until recently.³⁵

The State of Global Climate Policy

International conversations have helped change the world in the long run. Global climate governance is dramatically different today, compared to the 1990s. A look around the world reveals that climate policy is a remarkably vibrant realm of policy development and implementation. Aggregate climate governance comprising regional, national, subnational, and local policies as well as nonstate initiatives worldwide is thriving.³⁶ The fits and starts of the UN process should not obscure the bigger and brighter picture: today the vast majority of countries with significant emissions have ambitious domestic policies, many backed with detailed policy implementation plans (Table 6.1).

Globally, there is a distinct policy convergence toward building a cleaner economy. Many countries are heading toward low-carbon development, influenced by arguments about the economic benefits of climate action. In 2008, South Korea officially embraced a “Green Growth” paradigm of economic development, committed to 30 percent cuts by 2020 below BAU, and established a Global Green Growth Institute to systematize the green growth theory and spread it to developing countries to adopt it. Today countries are establishing new branches of government dedicated to climate policy such as Australia’s Department of Climate Change and Energy. Sweden plans to eliminate fossil fuels altogether by 2030. Norway plans to slash its emissions by 40 percent by 2020 and be carbon neutral by 2030. Costa Rica’s policy is to be carbon neutral by 2021.

National positions change slowly, but they do. The year 2009 marked the first time in the history of climate negotiations that developing countries agreed in principle to undertake international policy obligations and quantified targets. Brazil adopted a national law in 2010 to reduce its national emissions by 36–39 percent by 2020 below BAU. China now pursues a policy to achieve 40–45 percent cuts in carbon emissions per unit of GDP and to derive 15 percent of their energy from renewable sources and nuclear by 2020. Three years ago, Japan’s decision to cut its emission by 25 percent by 2020 would have been stunning news exceeding the boldest political hopes.

The EU continues to lead by example as well as argument. In March 2011, after extensive continent-wide public consultations, the European Commission adopted a “Roadmap for Moving

³⁵ Dimitrov 2010.

³⁶ Schreurs 2008; Selin and VanDeveer 2009; Dimitrov 2010; and Oberthür and Pallemmaerts 2010.

Table 6.1 National emission reductions pledges by selected countries

Country	Pledged emission reductions by 2020 (%)	Baseline	Long-term plans
Australia	5–25	2000	
Belarus	5–10	1990	
Brazil	36–39	BAU	
Canada	17	2005	
EU (27)	20–30	1990	80–95% by 2050
Iceland	30	1990	
Japan	25	1990	
Korea	30	1990	
Liechtenstein	20–30	1990	
Mexico	30	1990	
Monaco	20	1990	
New Zealand	10–20	1990	50% by 2050
Norway	30–40	1990	Carbon neutral by 2030
Russia	15–25	1990	
South Africa	34		
Switzerland	20–30	1990	
United States	17	2005	83% by 2050 compared to 2005 levels

Source: FCCC/SB/2011/INF.1 and Climate Action Tracker (www.climateactiontracker.org).

to a Competitive Low-carbon Economy in 2050.” The roadmap envisions emission reductions up to 95 percent by 2050. The transition would cost €270 billion per year, or 1.5 percent of GDP, but would save up to €320 billion per year on fuel costs. This long-term plan complements the existing highly elaborate and ambitious policy that includes 20 percent reductions of GHGs, 20 percent reduction of overall energy consumption, and 20 percent of that to come from renewables by 2020.³⁷ The “20–20–20 by 2020 policy” is now binding on all 27 member countries and is being implemented. These policy developments are substantial and constitute major progress over time. They reveal a rapid policy reorientation on a global scale toward creating a clean economy.

Significance and Future Research

Documenting international argumentation illuminates the role of dialogue in the evolution of policy preferences and helps clarify sociological processes of interest creation, reconstitution, and change. Global climate politics confirms that national interests are malleable. Government actors themselves believe that it is possible to change the preferences of others, and actively seek to facilitate a process of social learning and interest reconsideration.

³⁷ Oberthür and Kelly 2008; and Morgera et al., 2010.

One finding of central importance is that some techniques of persuasion rely on empathy rather than confrontation. In negotiations, states use carrots and sticks as external incentives to change behavior. However, they also target others with information aimed at changing their minds from within. Actors use existing national interests abroad to persuade foreign governments to change their policy preferences. Governments understand the national concerns of other countries. Some also appear to have a genuine respect for economic and political priorities abroad. Negotiating strategies involve intellectual warfare that is surprisingly empathetic rather than confrontational.³⁸ This stands in contrast with the widespread view of world politics as a muscular tug-of-war and ruthless self-centered behavior.³⁹

Further research on argumentation can make valuable contributions to two areas of academic inquiry. First, it would enable conclusions on the effectiveness of negotiating strategies. Uncovering the foundation of discursive strategies would help us build a comprehensive inventory of argumentation. The resulting typology of arguments allows us to compare the effectiveness of different approaches to persuasion. In the long run, the research program will generate recommendations to policy-makers on designing effective negotiating strategies. Second, argumentation research can facilitate the development of a future theory of interest formation. Political scientists of all theoretical stripes agree that social actors pursue their interests. Yet, we know little about how policy preferences emerge and change.⁴⁰ The role of dialogue in the evolution of policy preferences deserves concerted exploration that will provide insight into sociological processes of interest creation, reconstitution and change, and contribute to debates about how countries come to embrace policy proposals they previously opposed.

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³⁸ Deitelhoff and Müller 2005.

³⁹ Mearsheimer 2001.

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7 Do we need more global sustainability conferences?

Steinar Andresen

This chapter contemplates whether another global sustainability conference such as the one planned for Rio 2012 is really needed. What can be gained from adding to the vast number of multilateral environmental conferences currently at work, especially those concerned with the global multilateral environmental agreements (MEAs)? Is this the best way to spend scarce financial and human resources and will the conference produce tangible results and give sustainable development a boost? In order to discuss these questions I review the three main global environment and development conferences, drawing on the author's studies of the role of the UN in global environmental governance.¹

These studies asked what these conferences achieved and what explains their achievements? Given the lessons of these events, what should we expect the 2012 Conference to achieve? I argue that the 2002 Johannesburg Summit had much less significance than its two predecessors in 1972 and 1992. Is this indicative of a worsening performance trend, or was the 2002 conference simply an exception to the rule? Given that the world is a different place now from what it was in 2002, how is this likely to impact the performance and outcomes of the planned conference?

Global Conferences: Diminishing Significance?

There have been three major global conferences on the environment and development: the UN Conference on the Human Environment (UNCHE), Stockholm, 1972; the UN Conference on Environment and Development (UNCED), Rio, 1992; and the World Summit on Sustainable Development (WSSD), Johannesburg, 2002. Although 30 years separate the first from the last, in terms of formal outputs and approach to problem solving the similarities are nonetheless striking. All three had a preparatory phase, a main focus on soft political declarations and resulted in a Conference Declaration and some type of Plan of Action. The 1992 Rio Summit stands out as the most "productive," with three policy declarations, two legally binding conventions and one new institution. Stockholm issued two declarations and created a new institution, while the Johannesburg Summit produced two declarations.

The Stockholm Conference – A Watershed Event?

The Stockholm Conference scores high on agenda setting. Various international environmental treaties had been signed well in advance, but the Stockholm Conference put the environment firmly onto the international political agenda.² Knowledge building in the preparatory phase was crucial, with 86 states submitting national reports on pressing environmental concerns, vastly expanding the understanding of global environmental problems. This effective agenda-setting process spurred institution building nationally and internationally, with many countries establishing environment ministries in the wake of the conference. Internationally, hardly an

¹ Andresen 2007a.

² Linnér and Selin 2005.

international environmental agreement was established in the next two decades that did not have something to do with that conference. The key outcome of the Stockholm Conference was the establishment of a new environmental institution, the United Nations Environmental Program (UNEP) as a manifestation of the role of the UN in this area.

A total of 113 states took part – a high number considering the novelty of the issue, but only two heads of state. Important groundwork was done on the links between environment and development to secure participation of the South.³ For the first time internationally, “green” nonstate actors were also involved in the process. Nevertheless, it was basically a state-driven process focusing mainly on the environment.

The Rio Summit: The Peak Is Reached?

In terms of agenda setting, the Rio Summit was also very successful. In a survey of more than 250 experts from more than 70 countries, 88 percent said it had raised awareness of sustainable development.⁴ Media coverage and political interest were also extensive. The message of sustainable development underlined the contribution of the Summit to widening the scope of the agenda. The developing countries were also much more closely involved in the process, and the conference made way for the broader concept of sustainable development, which was more in line with Southern thinking.⁵ A total of 117 heads of state attended – at the time, the highest number of state leaders ever to gather together in one place. Considering the status of the environment as normally pertaining to “low politics,” this in itself was quite astonishing. Ten thousand delegates were in attendance, as well as almost 20,000 nongovernmental organization (NGO) representatives.⁶ At Rio, the environmental movement was also much more involved in the decision-making process than in Stockholm.

Most participants saw a need for a new institution with a name containing the buzzword of the day (sustainability) and the Commission on Sustainable Development (CSD) was created. Rio’s boost to institutional growth has been widely documented. The period with the greatest growth in regional and global environmental agreements was the years immediately after the World Commission on Sustainable Development (WCSD) in 1987 and the 1992 Rio Conference.⁷ There was also a surge in the establishment of environmental ministries in developing countries following the Rio Summit.⁸

Having said all this, the Rio Summit may not have been quite as imaginative or productive after all. First, the concept of sustainable development was not the true child of Rio; it had been introduced by the WCSD five years earlier. Second, the two conventions signed in Rio were not the result of the Summit as such: Rio was their birthplace, not their progenitor. Of the soft law documents, Agenda 21 is considered to be the most important by far.⁹ It is the most comprehensive and ambitious international development and environment document ever produced. An immediate effect was the setting up of more than 2000 Local Agendas 21 and national strategies for sustainable development.¹⁰ This may look impressive – but the developing

³ Ivanova 2007.

⁴ Najam et al. 2002.

⁵ Najam 2005.

⁶ Grubb et al. 1993, 12.

⁷ Mee 2005.

⁸ Linnér and Selin 2005.

⁹ Najam et al. 2002.

¹⁰ Töpfer 2002.

countries also expected to see significant sums of money coming their way to help them realize Agenda 21. That never materialized.

Still, there is little doubt that the Rio Summit marked a high point in the ambitions of the world community.

The Johannesburg WSSD: The End of Enthusiasm?

The “growing enthusiasm and ambition” exhibited by Stockholm, the Brundtland Commission, and Rio faced something of a reversal at the Johannesburg WSSD.¹¹ Roll-out of Agenda 21 was rather poor so the Summit was called to improve matters. One observer expected a “down to Earth Summit.”¹² Although implementation was the main theme, there was less attention on how to do it in practice. Instead, negotiators and the media concentrated on setting ambitious goals, targets, and timetables in the so-called WEHAB areas – water and sanitation, energy, health, agriculture, and biodiversity and ecosystem management. Most of these goals were not new, and were basically the UN Millennium Development Goals recycled. The agenda-setting effect of the Johannesburg Summit was therefore modest. Ambitious goals were undermined for lack of “specified funding, institutional mechanisms, or details about how they can be realised.”¹³ Without realism, financing, and institutional underpinning, the usefulness of the approach would obviously suffer.

High-level participation was also lower: 104 state leaders (compared to 117 in Rio). While the Rio Summit was a milestone in terms of green NGO participation, it was the turn of business and industry at the Johannesburg WSSD. The business community were taking sustainable development increasingly seriously, with a view to the significance of the market and a voluntary approach. Partnership type II agreements between private parties, governments, and other stakeholders ranked high on the agenda, also reflecting the new proactive stance of the business community. However, this particular process cannot be credited to the WSSD alone; it was already well underway by then.¹⁴

According to many observers, the most positive aspect of the Johannesburg Summit was its comprehensive approach as expressed in the inclusion of the “third pillar” of sustainable development: the social dimension, with its dominant theme of equality.¹⁵ It brought the concerns of the South closer to the core of the environment and development discourse. However, this broader approach is not without its critics. One criticism is that focusing so strongly on development came at the expense of international environmental issues. “Both agendas are important and distinguishable from one another. Trying to meld them ends up short-changing both.”¹⁶ According to that view, it could actually marginalize these Conferences even further insofar as the World Trade Organization (WTO), the World Bank, and the International Monetary Fund are far more important in development and poverty alleviation. The broader agenda was also criticized for not providing for a more holistic approach, where issue-areas were integrated.¹⁷

Although the conference was supposed to highlight the problems of implementation, the question of institution building loomed large in the prologue to the 2002 Summit and three new

¹¹ Elliott 2005.

¹² Speth 2003, 26.

¹³ Seyfang 2003, 226.

¹⁴ Gulbrandsen 2003.

¹⁵ Wapner 2003.

¹⁶ Charnovitz 2005, 100.

¹⁷ Gulbrandsen 2003.

institutions were created. The General Assembly established a Global Ministerial Environment Forum (GMEF) tied to UNEP. An Environmental Management Group (EMG), also linked to UNEP, was established to enhance inter-agency coordination. Finally, UNEP's Governing Council established an Open-ended Intergovernmental Group of Ministers in 2001 to examine options for strengthening international environmental governance.¹⁸ The process also included a discussion of a proposal about setting up some kind of World Environmental Organization (WEO); while WSSD would have seemed an appropriate forum to create such an institution, the issue never really surfaced in Johannesburg.

In sum, the agenda-setting effect of this Summit was modest. The Millennium Declaration is the current benchmark for measuring progress in relevant issue-areas – or lack of such – not the output from Johannesburg. The business community entered the fray with full force, though high-level attendance was down. Opinions on the broader and more comprehensive agenda are mixed. It made sense not to create new institutions and focus more on implementation. The problem with the Johannesburg Summit was that implementation did not fare so well either. This rather sober assessment of the WSSD seems to be confirmed by developments in its aftermath. In June 2003, the UN General Assembly voted to end the automatic five-year review of UN Conferences. From now on, decisions were to be made on a case-by-case basis, the rationale being that “these large events should be more strategic and less routine.”¹⁹

The Pre-Rio 2012 Process: Business as Usual?

Some of us believed that the end of the five-year review applied to +10 conferences as well, but we were wrong.²⁰ On December 24, 2009, the UN General Assembly adopted Resolution A/RES/64/236 to organize UNCED in Rio de Janeiro in 2012. Interestingly, this conference is not known as Johannesburg+10, but Rio+20. The most obvious reason is because this will be the second time Rio gets to host the conference. Another interpretation is that this is a ploy to divert attention from the poor performance of the Johannesburg Summit compared to the Rio Summit. Be that as it may, two themes were identified for the 2012 conference: a green economy in the context of sustainable development and poverty eradication; and a review of the institutional framework for sustainable development. The Conference would have three goals: secure renewed political commitment to sustainable development; assess progress and implementation gaps in meeting previous-agreed commitments; and address new and emerging challenges.²¹ No agreement has been reached on whether UNCED will be a high-level summit like its 1992 and 2002 predecessors or simply just another conference, as spelled out in the UN Resolution. Of the two themes – “green economy” – may be new in terms of the UN, but the concept is by no means novel. As to the institutional dimension, it was a key theme in the preparations to Johannesburg, but not at the Summit itself. The three goals are broad and general and say very little if anything about what the conference will actually address. The general impression of issue areas and goals is more reminiscent of routine and recycling than innovative strategic thinking. But let us take a closer look anyway at how the process has played out so far.

Three Preparatory Committee (Prep Com) meetings were scheduled prior to UNCED, lasting eight days altogether, very little given the time allotted for the pre-Rio negotiations. Not surprisingly, they have already run out of time. There will be intersessional meetings, regional

¹⁸ Elliott 2005.

¹⁹ Meyerson 2003, 6.

²⁰ Andresen 2007a.

²¹ *Earth Negotiations Bulletin*, January 2011, 1.

meetings, a number of country-led conferences as well as a full week for “informal informal” negotiations in each of the months of February, March, and April 2012.²² So far there have been two Prep Com meetings (17–19 May 2010 and 7–8 March 2011) and one intersessional meeting (10–11 January 2011), all at UN Headquarters, New York City. While the Prep Com meetings are traditional negotiation forums, the first intersessional meeting provided a more relaxed setting to learn and discuss the concept of green economy and the existing institutional framework.²³ In addition, discussions and preparation for UNCED loomed large at the 26th session of the Governing Council of UNEP in February 2011. UNEP Governing Council/Global Ministerial Environment Forum has fed actively into the UNCED process.²⁴

Based on the accounts in the *Earth Negotiation Bulletins*, there has been progress in the rather short period the process has lasted. Still, the Indian parable used to describe the status of the process during the first intersessional meeting in 2011 indicates that much remains to be done before a more precise approach and agenda are agreed upon.

A group of blind men touch an elephant to see what it is like. Each man feels a different part of it and comes away with a different understanding of what an elephant is. All we know for sure is that the elephant is going to Rio.²⁵

Nor, so far, is there any agreement on the definition of “green economy.”

Green Economy: The “Silver Bullet” to a Better World?

Overall, there are few or no surprises regarding “who says what and why” in the process so far. The ideological and substantive North–South conflicts still loom large, although the number of suballiances within the two major groups is growing. Irrespective of progress in global environmental governance over the last 40 years, North and South remain divided by the same issues. The North puts most emphasis on the environmental pillar while the South is mostly preoccupied with development and poverty. Divisions within the North are also the same as previous conferences have shown. As noted, the only relatively new element is the push for the concept of green economy. The idea has been discussed in the academic literature and in countries with “green” ambitions for some time.²⁶ Not surprisingly, the Northern countries are promoting it in the face of opposition, or at least, reluctance on the part of the South. Many Southern countries fear that industrialized countries could use green economy reasons to impose restrictions on trade or official development assistance (ODA). Some are also concerned that it could replace “sustainable development,” thereby downplaying social development. When discussing the meaning of green economy, they also want to link it to financing and technology transfer. In contrast, the proponents of green economy see it as the “silver bullet” not only to improve the global environment but also for enhancing sustainable environment and equity. They spin it as the best way of achieving these broader goals. Studying the process over time, green economy is becoming increasingly important and some Southern countries may be tempering their negative appraisal.²⁷ Somewhat contrary to the 2002 and 1992 conferences, the rich countries seem to have the upper hand in getting “their” discourse to the forefront.²⁸

²² *Earth Negotiations Bulletin*, March 2011, 5.

²³ *Earth Negotiations Bulletin*, January 2011, 1.

²⁴ *Earth Negotiations Bulletin*, February 2011.

²⁵ *Earth Negotiations Bulletin*, January 2011, 6.

²⁶ Kennet and Heinemann 2006.

²⁷ *Earth Negotiations Bulletin*, March 2011.

²⁸ Najam 2005.

The concept has also been supported and addressed in academic processes linked to the 2012 conference.²⁹

The concept is interesting, but “the proof of the pudding lies in the eating.” In other words, it has to be demonstrated whether it will yield significant and practical results on the ground for all actors. Prep Com II linked green economic thinking to oceans and ocean-related issues, stressing the importance of economic choices in protecting marine ecosystems. However, calls to reduce subsidies in fisheries have been heard for decades and proven exceedingly difficult to achieve. The green link to the oceans also seems somewhat arbitrary given the comprehensive ocean governance architecture already in place. In short, if the concept is not fleshed out, it may well suffer the same fate as sustainable development. In contrast to green economic thinking, everyone accepts the idea of sustainable development, though some 25 years after its introduction its practical significance is still limited. And irrespective of what they say at environmental conferences of various kinds, governments put economic growth first, not sustainable development. The recent economic recession is illustrative. For environmentalists it was an excellent opportunity to encourage a greener economy and, indeed, the economic stimulus packages adopted by key state actors included a variety of green components. Nevertheless, the overriding focus and attention has been on global economic recovery and economic growth, not more “greenery.” Nor is there any reason not to blame the economic recession for diminishing public interest in environmental issues. The “environmental hype,” which was particularly intense in the field of climate change between 2005 and 2008, was brought to a sudden halt by the economic downturn.³⁰ Also, it is difficult to see how UNCED intends to stoke a global surge in favor of green economy without the active support and cooperation of international economic heavyweights such as the WTO and the World Bank. The priorities and agendas of these institutions cannot be expected to be set at UNCED 2012.

It is not only the affluent “green” actors such as Germany, Norway, and the EU that have pushed for green economy. UNEP has also been very instrumental in this regard and has recently published a report discussing ways *Towards a Green Economy*.³¹ UNEP Governing Council also wanted UNCED to “carry out a deep analysis of all the implications of the various reform options from the Nairobi–Helsinki Consultative Group outcome.”³² Some delegates believed it should be the responsibility of UNEP/GMEF, not UNCED. Seen from the outside, it would seem to be an attempt by UNEP to set its stamp on UNCED’s agenda and make room for international environmental governance. UNEP has the general support of developing countries, not the least because it is based in Nairobi. Nevertheless, many developing countries are aware of UNEP’s status as an environmental organization, not mandated to deal with sustainability and poverty. This may be reason enough for some to criticize what they perceive is an overemphasis on the green economy platform.

Will There Be Institutional Reform?

Not least due to UNEP’s active promotion, institutional reform has largely dealt with IEG in the run-up to UNCED. Most developing countries are wary of a narrow environmental approach, and want a broader focus than UNEP. For example, Brazil has suggested an

²⁹ Najam et al. 2011.

³⁰ Andresen and Boasson 2011.

³¹ UNEP 2011.

³² *Earth Negotiations Bulletin*, March 2011, 7.

“umbrella” structure where also the United Nations Economic and Social Council (ECOSOC) and the Commission on Sustainable Development (CSD) are included.

Overall, the discussions on institutional reform are more or less a replica of those prior to WSSD and the cleavages and positions are more or less identical. The EU and allies want a stronger and “upgraded” UNEP, or maybe even a new institution built onto UNEP, something like a WEO.³³ Those thinking that this idea was effectively “killed” a decade ago, were wrong.³⁴ However, listening to the pre Rio+20 debates, the farther reaching WEO idea will probably not materialize. For various reasons key actors such as the US, China, and Russia oppose it. The likelihood that UNEP will become a specialized agency is also slim, also due to opposition from important actors. Instead, some less comprehensive and ambitious measures will probably be taken – to show that “something is being done,” as was the case in the run-up to Johannesburg. The main reason to simplify the system with UNEP as a centerpiece seems sensible in light of the increasingly complex and unruly global sustainable governance complex. UNEP Executive Director Achim Steiner’s viewpoint is summarized as follows:

[T]he status quo is no longer an option, with the multiplicity of meetings and processes “disenfranchising” smaller nations from participating in many of these discussions due to limited financial and human resources. He warned that the public will become increasingly sceptical of multilateral arrangements if the system cannot deliver results.³⁵

The enormous difference between the situation facing the participants at the 1992 Earth Summit and the present global environmental governance system has recently been well documented.

Only the most farsighted, however, could have predicted that over the next 20 years, the global environmental agenda would grow in scope and intensity to rival “hard” issues of security, trade, and disarmament. Two decades later, the annual calendar of global environmental meetings consists of a near continuous round of negotiations – barely a fortnight goes by without an environmental meeting somewhere on the planet.³⁶

Although the frequency of diplomatic meetings is not necessarily indicative or a determinant of the importance of the issue, the description of what has happened in these two decades is certainly well taken. Echoing the sentiment of the UNEP Executive Director, a number of negative consequences were pointed out as “All of this activity, however, should not be confused with achievements.”³⁷

In short, Steiner’s diagnosis makes sense: the question is whether the same goes for the cure, a stronger role for UNEP in a simplified system. Looking at the present system, MEA negotiations occupy top spot, particularly in the field of climate change. Hence, in the run-up to the 2009 Copenhagen Conference originally meant to define the future of the climate regime, representatives of practically every country met for six negotiation sessions, covering 10 weeks. The climate change calendar on the UNFCCC website also tells us “that some kind of meeting organized by the Secretariat was scheduled for nearly 140 days in 2009.”³⁸ Although the climate issue is quite unique in terms of negotiation intensity and level of participation, similar trends

³³ Biermann and Bauer 2005.

³⁴ Andresen 2007b.

³⁵ *Earth Negotiation Bulletin*, May 2010, 7.

³⁶ Chasek 2011, 1.

³⁷ Chasek 2011, 24.

³⁸ Chasek 2011, 5.

typify other MEAs as well. UNCED or potential reform suggestions are not likely to change this much. For example, there are no links between the climate change regime and UNEP and the MEAs with connections to UNEP in general do not want stronger UNEP coordination.³⁹ If the negotiators insist on meeting more often, there is nothing to stop them other than themselves. Considering how little is achieved and how slow the progress is on, for example the climate issue, delegates should either refrain from taking part as nothing is likely to happen until the last minute anyway, or, even better, limit the number of negotiation sessions to force an agreement through. In short, how much will be achieved in the two flagged issue areas, green economy and institutional governance, is an open question. I am sure “something” will be arrived at; whether it has much practical significance in terms of creating a more sustainable and equitable world is less likely.

Concluding Remarks

Considering that nothing had ever been done on the global scale to effect an environmental agreement and appurtenant institutions it made good sense to arrange the 1972 Stockholm Conference and it served its purpose well. The results of the 1992 Rio Summit are more mixed. It did well in terms of setting the agenda and building institutions, but the aspirations laid down in Agenda 21 were never realized. While the 2002 Summit made some progress, it is doubtful whether the benefits outweigh the costs in economic, human, and institutional terms. The wider context in which these conferences took place can in part explain their varied success rate. For example, the early 1990s was characterized by political and economic optimism after the fall of the “iron curtain” in Eastern Europe. In contrast, the 2002 conference took place at a time of war and pessimism. Fear of terrorism rather than the environment claimed top spot on the agenda. Individual leadership was also much stronger during the first two conferences compared to the Johannesburg Summit.⁴⁰ In terms of key actors, the role of the US in these conferences has changed from positive and influential (1972) to negative, but is still influential in Johannesburg.⁴¹ The EU has had too many internal conflicts to fill the vacuum left by the US leadership.⁴² The Johannesburg Summit may have been a victory for the G77 discourse, but the broader approach produced few if any practical results.

There is no reason to believe that the 2012 Conference will be more successful than a decade ago, essentially because there is no need for this type of conference any longer. The main challenge is implementation, not agenda setting. And implementation cannot be initiated at a “super global level.” The domestic level is most crucial. The previous conferences have taught us that. I agree that ideally some streamlining and simplification should be made, as others have suggested, but not by arranging yet another mammoth global conference. If there really were a political will and consensus, there are plenty of forums in which to deal with it. The problem is that no such consensus exists; the main camps are fundamentally divided on interests and discourses. The EU favors a top-down, streamlined approach while the US advocates a market-based, competitive, bottom-up approach. The leading developing countries are more preoccupied with development than environment. Similarly, it is hard to see how the concept of green economy would warrant a conference of this kind. It is strange to see the global sustainability community having to search for topics to discuss – to find a blank space in the

³⁹ Andresen and Rosendal 2009.

⁴⁰ Andresen 2007b.

⁴¹ Chasek 2007.

⁴² Vogler and Hannes 2007.

already overpopulated sustainability agenda. This is in stark contrast to the 1972 and the 1992 conferences, which fulfilled real needs.

More specifically and in terms of what can realistically be achieved (political feasibility) at the conference, the context and prospects are also quite bleak. Economic recovery, security, and international terrorism are still at the forefront of government minds, with less time to spare for environmental issues. We know that such attention is cyclical and may change, but these conferences will not be more necessary simply because of a change in sentiment. And in any case, there are many stumbling blocks. Few doubt the political ambitions of US President Barack Obama, but they were stonewalled during the 2011 mid-term election. It is not only conservative Republicans who have little enthusiasm for global UN sustainability conferences in the US.⁴³ Little evidence there, then, of a proactive role by the US at the coming UNCED meeting just before the US presidential election. After the Johannesburg Summit new geopolitical realities brought new actors to the forefront, such as Brazil, India and, not least, China. Their influence and confidence are waxing, witnessed last at CoP 15 in Copenhagen, at which the EU was marginalized. The engines and architects at these events are no longer mainly the US and the EU; the emerging economies need to be counted in. They are all very conscious of their sovereignty, new-borne status and right to set their own development priorities. Their demands are certainly legitimate, but that would not necessarily make progress in Rio any easier.

The output from these global conferences is usually characterized by high and vague ambitions, very hard to realize under real-world circumstances. Why not think in a different, new and I believe more strategic way: the UN could establish a small commission of “wise people” from academia and experienced diplomats to make a “political feasibility report” regarding various options to create a more sustainable world. Political feasibility can be seen as a function of the extent to which it caters to the values and interests of pivotal actors or winning coalitions. Such a report would necessarily be sober and realistic with few or no ambitious goals, but it might at the same time point toward options for improvements, but most actors probably still prefer the traditional all-inclusive global approach where they can all take part.

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⁴³ Chasek 2007.

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8 Changing North–South challenges in global environmental politics

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As we enter into the second decade of the twenty-first century, it becomes evident that environmental and related equity challenges far out-pace the evolving governance processes.² Environmental problems are escalating into major socioeconomic catastrophes; the scale of these problems is becoming global; and they are passing ecological tipping points and perhaps even social tipping points, but social challenges (such as lack of access to land, food, water and sanitation services) have not yet been expressed in such terms.

The processes and tools of environmental governance are also evolving rapidly. However, democratic governance in the context of sovereign states has often meant that cooperation is captive to the willingness of states to take action that goes beyond the protection of narrow, short-term national interests. There is thus an environmental governance gap. In the autonomous and sometimes steered processes of institutional evolution to cope with escalating environmental problems, there are many changes in governance patterns. These changes occur at multiple levels of governance and may also arguably change the playing field of governance. At the same time, the actors engaged in governance are changing. There is thus a diversity of issues that need to be researched in the arena of environmental law and politics such as principles of governance, institutional fit, interplay and scale,³ multilevel governance, changing governance patterns,⁴ output, outcome and impacts, and so on. These are, in fact, the mainstream areas of research in international environmental law and politics. However, this chapter focuses on one area – which has always been on the margin of global debate – and argues that this should become more mainstream: the “North–South” debate. The North and the South are changing, the relations between them are changing, and the hypothesis of this chapter is that all these different changes at the global level may have complex interactions and impacts on the weaker actors in environmental governance.

This chapter addresses the questions: how do global change, governance change, and North–South change impact on the ability of the weaker parties to participate effectively in governance processes? How can such changes be made the subject of systematic study in order to improve the global processes of governance? In order to assess and analyze these questions, the chapter first elaborates on these three types of changes, then examines the governance processes in three policy arenas, and proposes the North–South GAP methodology for assessing environmental governance from the perspective of weaker countries (and/or parties), as opposed to more mainstream perspectives. It then draws some conclusions.

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² Walker et al. 2009.

³ IDGEC 1999.

⁴ Kingsbury et al. 2005; Krisch 2006; and Krisch and Kingsbury 2006.

Before delving into the analysis, it may be appropriate to counter the main arguments of critics who feel that over the last two decades the North–South approach has outlived its usefulness, if indeed it was ever useful. They argue, first, that North–South are broadbrush categories that provide little clarity for analytical purposes since there may be more differences between members of the South than between North and South;⁵ second, that the North and the South no longer exist as such, and hence, the discussion is irrelevant (North–South was a useful idea in a post-colonial, foreign-aid world; but is no longer useful⁶); third, that a North–South approach polarizes issues and creates blocking coalitions;⁷ and finally, that other nonstate actors have become so much more important in global governance, that they obviate the need for taking such an approach. My justification is that in the social science tradition, ideal-typical analytical approaches often help to clarify issues even if they are less nuanced; second, that even if the North and the South are changing, there will always be a more powerful and less powerful actor in governance processes,⁸ and a North–South approach helps to focus more clearly on especially the equity issues and the views of the weakest actors which often become a casualty of efficient and patronizing processes; third, that it is wise to be wary of the possible persistence of neo-colonial approaches on the one hand and the psychology of third-worldism on the other hand;⁹ fourth, that while North–South politics may have a polarizing effect, the *analysis* of North–South politics may help expose hidden biases¹⁰ and create opportunities for real dialogue and structural and systemic as opposed to incremental and sectoral change. Finally, the rise of nonstate actors has not obviated the need for a state-centric approach. On the contrary, environmental issues call more urgently than ever for greater control over social actors who try to externalize their impacts; and the primary dimensions of national politics (voting by citizens only and guarded political boundaries), fiscal systems (taxes on residents), and foreign policy (to promote the interests of those in a country) become even more nakedly evident during a global recession than otherwise. In fact, more than ever before, a new community of researchers is growing around research issues that focus on this North–South debate either directly (for example, the Third World Approaches to International Law (TWAIL) scholars) or indirectly.¹¹ In fact, it is precisely in a changing world of North–South politics that it becomes even more relevant to look at these issues.

Three Contextual Changes in Governance

Introduction

This section elaborates briefly on three contextual changes in governance and highlights how each of these has impacts on the more vulnerable groups of countries.

⁵ Harris 1986; Toye 1988; and Sebenius 1993.

⁶ Toye 1998.

⁷ Andresen and Wettstad 1992; and Benedick 1993.

⁸ Nyerere 1983; and South Commission 1990.

⁹ Ramphal 1983; and Minowitz 1993.

¹⁰ Special issue on “Situating Third World Approaches to International Law TWAIL: Inspirations, Challenges and Possibilities” 2008.

¹¹ See, for example, Green and Chambers 2006; and French 2010.

Environment and Related Equity Issues

The environmental impacts of development practices are spiraling out of control.¹² Competition for access to resources (for example, minerals, biofuels,¹³ water,¹⁴ land,¹⁵ genetic resources) and ecospace (environmental utilization space) is becoming more intense.

These environmental issues have related equity challenges. Let me explain with examples. In the area of climate change, emissions of greenhouse gases contribute toward the problem of climate change. The national pledges following the Copenhagen Accord¹⁶ are unlikely to help countries stay below the 2 degree global warming target recommended by the Intergovernmental Panel on Climate Change (IPCC).¹⁷ This then has different types of equity impacts on different types of developing countries. For small island states such as Tuvalu, sea-level rise may threaten their very existence. For larger countries like China and India, on the one hand, the potential impacts of climate change are likely to have major effects on their economies; and, on the other hand, the discussion about emission limits affects their “Right to Develop,” which was finally recognized by the UN General Assembly in 1986.¹⁸ In the case of river basin management, different types of North–South issues emerge. In the classic case of the Nile, agreements between Egypt and Sudan dating from colonial times, make a clear legal claim on the bulk of the Nile. This implies less water for the remainder of the upstream countries that have been trying through a variety of means to counter this legal claim of one of the more powerful countries in the Nile Basin.¹⁹ In the case of forest management, any attempts at rewarding states for reducing deforestation may lead inadvertently to states that protect their forests at the cost of recognizing the customary rights of those who live in those forests.

The paradox of environmental challenges is that not addressing them often exacerbates the problems of the most vulnerable (for example, when sea-level rise continues to affect the rights of low-lying coastal communities); but that addressing them may also lead to exacerbating the rights of the most vulnerable if efficiency takes precedence over equity criteria.

Changing Governance Patterns

In order to deal with the rapid pace of global change, the process of governance is also evolving fast. On the one hand, there has been a major shift from government to governance at the national level, and at the global level this shift has undergone four stages.²⁰ In the initial stages, nongovernmental organizations (NGOs) were merely consulted in governance processes. It should be noted here that NGOs in international law include all nonstate actors – including religious actors, social movements, industries, and so on. Then NGOs were invited as formal observers in the negotiation process. In the third stage, they were protected, empowered and actively engaged in the process. The numbers of NGOs participating in formal intergovernmental processes exploded exponentially. In the fourth stage, NGOs have become emancipated – they have now become competing centers of governance in the global arena. A critical issue here is that the mere explosion of the number of NGOs participating in the global arena does not

¹² UNEP 2007.

¹³ De Fraiture et al. 2008; and Dauvergne and Neville 2009.

¹⁴ For example, Gleick 2003.

¹⁵ IPCC-1 2007.

¹⁶ Copenhagen Accord 2009.

¹⁷ McKibbin et al. 2010.

¹⁸ UNGA 1986.

¹⁹ Swain 1997.

²⁰ Gupta 2003.

necessarily mean that the issues of the more vulnerable will be adequately represented and taken into account in the changing governance processes.

Furthermore, the locus of governance is shifting. It is shifting from states to supranational bodies such as the European Union, to international organizations such as the World Trade Organization, to courts such as the European Court of Justice but also to private international arbitration (especially in the area of water conflicts), to hybrid agencies such as the Forest Stewardship Council, and to different networks of governance.²¹

This means that the nature of governance is also changing in the process. Four types of changes can be observed. First, there is a shift from legislative to administrative processes.²² This increases the power of the bureaucracy as opposed to the power of elected representatives at the national level; and at the international level it implies that the explicit requirement of state consent can be bypassed. For example, the annual meetings of the Conference of the Parties to the Climate Change Convention lead to decisions that have impacts on participating countries, without actually calling for state consent.²³ Such decisions are shaping the new measures to combat deforestation in developing countries. In the water arena, the promotion of river basin commissions at fluvial level implies again a shift of power from states and decisions subject to state consent to administrative processes that can potentially bypass state consent.²⁴ Second, pluralistic forms of governance are visible.²⁵ Pluralism implies that more than one set of rules apply within a specific jurisdiction. At the national level this may imply a difference of opinion as to who has land, forest,²⁶ water²⁷, and fishing rights²⁸ – where the state may make formal, written, (often post-colonial) claims that are countered by local communities with informal, unwritten, but long-recognized local customary rights (often ignored or misunderstood during the colonial era). At the international level, this often implies a diversity of regulatory approaches applying through a diversity of tools to the same region. For example, the UN General Assembly Resolution on the Right to Water²⁹ may apply to Ghana, while at the same time, through aid processes, the economic pricing of water may have been transferred to Ghana as a more suitable tool for water management.³⁰

A third change is the shift to multilevel governance processes. While in general this implies a shift from either top-down or bottom-up processes to multidirectional governance processes, I am, in particular, referring to the long-arm effect of multilevel governance processes in the era of globalization – the extra-territorial impacts of regional governance. This may lead to different voluntary standards on a variety of products (for example, pesticide residues on agricultural products) that have an impact on producers in different parts of the world who were not initially engaged in discussions regarding these standards.³¹

The last change refers to the merger of public and private international law and the odd permutations and combinations that one may get as a result of such mergers. In the water arena,

²¹ Van Kersbergen and van Waarden 2001.

²² Kingsbury et al. 2005.

²³ Churchill and Ulfstein 2000; Hey 2001; and Brunnée 2002.

²⁴ Dellapenna and Gupta 2009.

²⁵ Krisch 2006; and van der Grijp 2008.

²⁶ Barry and Meinzen-Dick 2008.

²⁷ For example, Singh 1991.

²⁸ Bavinck 2005.

²⁹ UNGA 2010.

³⁰ Agyenim and Gupta 2010.

³¹ Van der Grijp 2008.

the shift toward allowing private sector actors a greater role in water services led to confidential contracts between the state and private actors.³² If and when these contracts were subsequently breached leading to confidential arbitration proceedings, the arbitration awards of these relatively non-transparent proceedings then govern the policy processes on water management in individual countries. In the climate change arena, the desire to involve nonstate actors has led to, for example, the Clean Development Mechanism (CDM). While a part of the CDM is open for public scrutiny as part of the public international law process, the actual contracts are confidential, and breach of such contracts can potentially lead to non-transparent arbitration proceedings.³³

These changes in governance imply that often there are major gaps in governance (issues that no one covers); there is regulatory competition when bilateral and multilateral climate related agreements try to compete with the UN Framework Convention on Climate Change (UNFCCC); there are regulatory overlaps which lead to different bodies trying to govern the same issues; and there is co-regulation where different types of agencies agree to co-regulate; but which may inadvertently bring out the worst in both, instead of the best in both.

Changing North–South Dynamics

Let us then move to the next area of change – the change in North–South dynamics. North–South dynamics exist by virtue of two characteristics in the global arena. First, in terms of voting power, based on the idea that each sovereign state has one vote the South has around 130–150 votes; the North has around 40–60 votes, depending on how one defines North and South. Any simple to complex majority voting system would thus empower the South over the North. This means that a shift to unanimity, consensus decision-making and double majorities is often invoked in international arenas to ensure that the voting power of the North is maintained. A second characteristic of the North–South issue is the aspect of wallet power. The Northern countries, by definition, have a collective wealth that is greater than that of the developing countries – so they are better able to decide which decisions they will finance and which they will not and they are able to use double majority voting systems in specific areas.

The concept of North and South (or rich, poor; developed, developing; First World, Third World) is deeply rooted in the psyche of countries and peoples; perhaps more deeply etched in the psyche of developing countries than in the developed because the scar of colonialism is a substantial part of their history in the last millennium!³⁴ They have common histories (colonial pasts); belong to the political periphery (except China which is a member of the Security Council); are mostly geographically clustered to the South of the North (except that two Northern countries are in the South – New Zealand and Australia); continue to have plural cultures – a post-colonial influence and traditional societies; have relatively unstable political systems and do not all enjoy the rule of law (with a few exceptions); have not met basic needs (as measured by the human development index) of many within their countries (with exceptions such as Singapore); face serious access and pollution problems within their domestic context (except perhaps countries such as Costa Rica); have lower access to science and technology (except in small pockets of China, India, and Brazil); and are generally poorer on a per capita basis (except countries such as Brunei and Singapore). They also have a tradition of 50 years

³² Tecco 2008.

³³ Klijn et al. 2009.

³⁴ Ramphal 1983; and Minowitz 1993.

of formal political cooperation with each other within the forum of the G77 which was itself created in recognition of the North–South problem and in order to empower the South.

The North–South challenge has evolved over the years. One can distinguish five phases in the evolution of the North–South relationship. The first phase is the colonial relationship where the South provided the North with the resources to feed its drive to industrialize. The second phase is the post-colonial, post-World War II phase of tripartite politics with a First, Second and Third World, where the Third World could often play off First World against Second World, where many remained non-aligned to ideological politics within the Non-Aligned Movement; and this phase lasted until 1990. This was the period of enlightened politics following the establishment of the UN Charter in 1945, the period in which the G77 was established in 1964, the era that led to the adoption of the New International Economic Order instruments in 1974 which then faded into oblivion, the era that led to the UN General Assembly Resolution on the Right to Development which, however, remains contested. The third phase is the phase of North–South politics where political positions hardened along First World, Third World distinctions. The Second World which broke up with the fall of the Berlin Wall was partly incorporated into the First World and partly left out and became by default part of the South. Global treaties and instruments from this era divided the world primarily into developed and developing countries (for example, Agenda 21, the Rio Declaration, climate change, biodiversity, desertification, the Global Environment Facility), emphasizing the differences between the two groups *as well as* perpetuating them, especially as no clear criteria for graduating in or out of groups were specified. The South felt empowered to some extent as they expected more resources to be channeled into development issues following the end of the Cold War and as they felt that morally and physically they had the upper hand in the climate change, ozone layer, and biodiversity negotiations. The fourth phase is the phase of dominant unilateralism. In many areas – security and environmental issues – the US has decided to go unilateral; the Rio Declaration³⁵ did not make hard law status at the World Summit in 2002, the Doha trade round failed and, since 9/11, resources have been pumped once more into security issues. This phase delivered very little progress. We are now entering the fifth phase of North–South relations. There is recession in most Northern countries; and the end is not yet in sight. Northern demographics and pension worries are leading to new constructions of economic and social welfare systems. Many Southern countries are benefitting from their relative financial isolation from the global system and their economies are booming. New North–South discussion platforms are emerging such as the G20 and the BRIC (Brazil, Russia, India, and China); some Southern countries are becoming members of the North (for example, Chile is the most recent addition to the OECD group of countries). However, whether or not China, Brazil and others are invited to and decide to join the group of rich countries, there will always remain a periphery of over 100 poorer countries (more than the 77 that were initially members of the G77); and North–South relations may become further exacerbated if some of the *nouveau riche* (such as China) allegedly take on neo-colonial relations with other poorer countries in Africa and if the relatively more powerful Southern countries leave the group of the poorer countries.

At the same time, North–South can also be used as shorthand to express the relations between powerful–powerless countries and actors within regional and national contexts.

³⁵ Rio Declaration 1992.

Inferences

This section has argued that the paradox of environmental challenges is that, if unaddressed, they may further exacerbate the situation in the South; but, if addressed, they may also create new equity problems. Further, it has argued that on the governance front, there has been a shift from government to governance, a shift in the locus of policy-making, and a shift in the nature of governance. These may affect weaker countries. Furthermore, it has been argued that whatever the changes at the margin, there is likely to remain a powerful core and a less powerful periphery; that the competition for land, biofuel, food, forests, water, minerals, and ecospace will lead to new kinds of environmental problems with their related equity components. This implies that the North–South discourse will remain critical, though changed. This is because the changing governance patterns may further marginalize the positions of the weakest, unless there is a serious attempt made to ensure that they meet good governance criteria.

Three Case Studies with Different North–South Dynamics

Introduction

This section elaborates on the different North–South dynamics in some different governance arenas (climate change, water, forests). It looks briefly at the issue area, the governance pattern in terms of the organization of governance, the actors in governance, the “North–South” dynamics, and the impacts on the more vulnerable countries.

Climate Change

The climate change issue is a relatively focused issue. From a technocratic perspective, it focuses on the emissions and sinks of greenhouse gases and methods to deal with the impacts of climate change. The UNFCCC³⁶ embodies this technocratic approach, adopts a long-term objective and allocates rights and responsibilities between countries based on five principles. There has been a paradigm shift over the years to explicitly link and perhaps even mainstream climate change in the broader development debate.³⁷

Governance is highly structured and centralized within the climate change discussions. The science is collectively assessed mostly within the framework of the work of the IPCC. It is linked with the negotiation process through the Subsidiary Body on Science and Technological Advice. Most of the policy processes take place within the five bodies set up by the Climate Change Convention. However, there are at least 30 UN agencies that work in climate change-related areas, but most participate as observers to the negotiations and draw their mandate for climate-related activities from the negotiation processes. Furthermore, there are several climate change-related bi- and multilateral agreements that have been pursued actively by the US (and other developed country) governments with respect to specific developing countries. These include the Global Methane Initiative agreement and the International Partnership on the Hydrogen Economy. These can potentially compete with the climate change regime as they seek a technology-oriented route in preference to a targets-and-timetables route to climate mitigation; but the US government has repeatedly argued on its website that these initiatives are part of its fulfillment of its obligations under the Climate Change Convention.

³⁶ UNFCCC 1992.

³⁷ For example, Kok et al. 2008.

There are literally dozens of categories of actors in climate change governance from the local (municipalities, communities, International Coalition of Local Environmental Initiatives) through to the global level (states, multinationals, international organizations, global NGOs, epistemic communities). They are fairly well organized and they provide their inputs inside and outside the venues of climate change negotiations.

The North–South dynamic has three elements³⁸ – a persistent division of the world into Annex I/B (developed) and non-Annex I/B (developing); the allocation of rights and responsibilities based on this division within Article 3 of the Climate Change Convention; and the notion of the leadership paradigm. The leadership paradigm was developed to promote the idea of Northern leadership and that the South would follow and this was the social contract underlying the Climate Change Convention. With the US failing to provide leadership in terms of targets and timetables, the willingness to lead in most other developed countries has diminished over time. This has two consequences: on the one hand, postponement of efforts to address the climate change problem implies that the potential impacts begin to threaten the most vulnerable countries;³⁹ second, the delay in reducing emissions makes it even more difficult for developed countries to reduce emissions, and reduces the space for developing countries (not just China and India but also the smaller countries) to increase their emissions commensurate with their right to development. This makes the climate change issue a hotbed of North–South dynamics. While the US has tried to change the dynamics by pointing to China as the key laggard/free rider in the regime, even if China were to take on legally binding targets there is no guarantee that the US will follow. China will therefore hold out as long as it can to have some negotiating power over the US. Within regions and countries there will also be most likely a “North–South dimension” – which sectors, actors, and regions will have to reduce their emissions most; and which sectors, actors, and regions are most likely to be affected by the impacts of climate change.

The lack of a legally binding regime of targets and timetables exposes the more vulnerable people in different countries all over the world to the impacts of climate change. The pressure to adopt targets on the developing world is not in accordance with the initial social contract violates their right to development and this creates new equity challenges.

Fresh Water

The fresh-water issue, in contrast, is more diffuse. There are different types of fresh water (blue, grey, green, ground). The water issue is about the allocation of water resources and the allocation of rights and responsibilities between different uses and users, taking into account existing property rights. There is a lot of discussion about whether water is a local, national, fluvial, or global issue; the politics of scale implies that different actors may argue in favor of limiting the level of water management to where control is most lucrative or relevant to the actors in the regime. Thus, nation states with water poverty may seek to define water as a strictly national resource; hydrologists as a river basin issue; system scientists as a global issue.

The organization of water governance globally is highly diffuse. In terms of law, there is one global fresh-water law that is not yet in force⁴⁰ (and one on oceans that is in force).⁴¹ In terms of UN agencies, there is no obvious center for water governance. Fresh-water governance is

³⁸ Gupta 2010.

³⁹ UNEP 2007.

⁴⁰ UN Watercourses Convention 1997.

⁴¹ UNCLOS 1982.

dispersed among 28 UN agencies. UN Water, established in 2003, aims to coordinate the work on fresh water within the UN agencies. (UN Oceans coordinates the oceans related work within the UN system.)

In addition to the mass of UN agencies working on fresh-water-related issues, there are nonstate actors – there is the annual Stockholm Water Week which brings scholars and policy-makers together, the Global Water Partnership, the World Water Council, and the World Water Fora. There are nonprofit organizations, social movements, and large multinationals working in the area.⁴² A key actor shaping discourses in countries are the aid agencies that provide assistance for dealing with water resources.⁴³

In general, there are more local, national, and fluvial “North–South” dynamics in the fresh-water issue than global. The local, regional, and national issues are about how formal water rights are to be reconciled with customary water rights (for example, can one build a dam on a river based on the assumption that the river belongs to the state, when customary usage shows that the local riparians have a longer customary right to the water?). The discourse of pricing water according to its value may conflict with the discourse of providing water to satisfy the human right to water and sanitation;⁴⁴ or may lead to water moving from low-value aesthetic goals in rural areas to high-value golf courses in urban areas (for example, in the US).⁴⁵ The issue of historical rights to water versus potential future uses of and rights to water creates “North–South” type discussions on equitable utilization of water⁴⁶ within specific river basins as in the Nile.⁴⁷ The human right to water and sanitation discussion is clearly a national and local issue, but to the extent that it creates universal responsibilities it may take on a North–South dimension. The wording of the UNGA Resolution on Water and Sanitation attempted to establish such a universal responsibility.⁴⁸

The diffuse and pluralistic governance processes often lead to lack of clarity regarding ownership rights with respect to water. The multiple fora within which water policies are made make it difficult for countries and actors with scarce resources to participate effectively. The lack of arenas and fora for global consensus often implies that ad hoc policies are promoted in different countries, often through the tool of development cooperation.

Forests

At first glance, the forest issue looks like a relatively simple issue. However, as one peels open the layers of complexity, one discovers that not only are there very many different definitions of forests (for example, when does a bush qualify as a tree or as a forest), there may be a diversion between so-called forest reserves on national maps with remote sensing data imagery, there may be no clarity as to who has “ownership” rights to forest lands⁴⁹ and so on. A key issue is also whether a forest is a “global common heritage” or “national property” or simply “local property.”

Attempts at governing forests and timber trade have a long history. There are a number of *direct* forest governance efforts – the international Tropical Timber Organization (1986); the

⁴² Pahl-Wostl et al. 2008.

⁴³ Scheumann et al. 2008.

⁴⁴ Gupta et al. 2010.

⁴⁵ Weiss et al. 2005.

⁴⁶ Kaya 2003.

⁴⁷ For example, Swain 1997.

⁴⁸ UNGA 2010.

⁴⁹ Barry and Meinzen-Dick 2008.

International Tropical Timber Agreement (1994/1997); forest principles adopted at the United Nations Conference on Environment and Development (1992); the Strategic Plan for Forestry (1999); the UN Forum on Forests (2000); the Collaborative Partnership on Forests (2001); the Forest Stewardship Council (2001); the World Bank Forests Strategy (2002); the Global Environment Facility Operational Programme on Forest Ecosystems (2007); and the new policies on reducing deforestation within the climate change regime. There are also several *indirect* forest-related policies – on the role of indigenous peoples within the International Labour Organization, on forests and wetlands, on endangered species,⁵⁰ on forests and heritage,⁵¹ on forests and biodiversity,⁵² and so on. Like water, the diversity of governance arrangements makes this a diffuse area of governance with a diversity of actors from local through to global level, from state to nonstate actor. There have been incremental policy developments in this field – referred to as “ad hoc incrementalism” – that have not led to systematic, coherent strategies.⁵³

The North–South dynamics in the forestry field play out at local through to national levels in terms of pluralistic ownership regimes, in terms of the politics of which land is protected and which not, and hence, how this impacts on the opportunity costs of different types of forest owners and forest dwellers. At the international level, there have been changing North–South dynamics over time. Canada has always seen forests as global; the US argued for global forest control in 1992 and by 2006 had reversed its position. Brazil has always argued that forests were a national issue and possibly with the new climate change discussions is beginning to accept the importance of forests at a global level. To some extent this has to do with the importance of trade to national forests, the willingness to accept governance principles from global authorities, and the desire to access resources and/or emission credits from other countries. The diffuse nature of forest governance also does not make it easier to have transparent and accountable systems of governance from the local through to the global level, and in such situations it is relatively easier to further victimize the vulnerable.

Inferences

A comparative analysis reveals that the systems of governance are different in the three issue areas; that climate change has a relatively centralized system of governance at the global level compared to the more diffuse systems of governance of the other two issue areas at the global level. While climate change has primarily a North–South dimension at the global level, it also has a more local “North–South” dimension. The equity issues in the other two issue areas are primarily more regional and local, although they are being increasingly constructed as global issues with a global equity dimension as well.

Towards a Theoretical Approach to Analyzing North–South Issues

Starting Points

If I begin from the assumption that in any political configuration, there are powerful and powerless actors; that in their relationships with each other, the powerless may be marginalized if there are no safeguards in place to protect their interest; then clearly there is a need to

⁵⁰ CITES 1973.

⁵¹ WHC 1972.

⁵² CBD 1992.

⁵³ Humphreys 2006, 213.

investigate and analyze these relationships. I shall further argue that while efficiency and short-term effectiveness may often overrule equity aspects, no system of governance can endure or be effective in the long term if it is not truly democratic and if it systemically marginalizes a very large section of society. An article in *Science* argues that what is needed is not an alternative governance framework, but “a renewed focus on effective cooperation, facilitated by better designed institutions.”⁵⁴ A critical issue then is – what is a better designed institution? This section argues that one element of a better designed institution is a more equitable institution.

An Eclectic Approach

The approach below draws on three theoretical frameworks. From the relatively young research program of Earth System Governance that focuses on five analytical themes (architecture, agency, access and allocation, accountability, and adaptive governance) and four crosscutting issues of knowledge, scale, power, and norms,⁵⁵ it builds further on the access and allocation theme and the crosscutting issues of power and norms as providing a framework within which research on equity issues can be elaborated.

It then uses ideas and insights from the TWAIL school of thought. While this school has been on the margins for a long time, it is gradually becoming more mainstream. This school has been through three phases in its development.⁵⁶ In the first phase, it analyzed the post-World War II developments in international law from the perspective of the colonized and the newly independent states. It argued that international law was used to promote and justify hegemonic interests. In the second phase, it examined the new economic institutions being established. The authors then argued that power politics in the economic arena were being institutionalized incrementally through the use of international legal instruments.⁵⁷ In the post-9/11 world, TWAIL has focused more on international terrorism. Although TWAIL has not turned its attention to environmental issues, it has elements that could be relevant for a North–South environmental analysis. TWAIL’s triple arguments are that first, international law and international organizations are used to perpetuate the interests of the most powerful countries (traditionally the Western countries). Sometimes common standards are prescribed to an unequal world,⁵⁸ sometimes powerful countries seek to have an exclusive position and opt out of specific regimes (for example, free trade is not equally applicable to the agricultural sector in Europe, or human rights issues are not applicable to the US as the US refuses to sign several human rights agreements⁵⁹ or to the former colonies).⁶⁰ Second, these approaches are framed in “neutral language” that hides the subjective nature of the ideas behind them.⁶¹ This ideological framework is predominantly West-centric, where Western values, ideologies, and perspectives are used to frame global discourses.⁶² The literature identifies three framing approaches – one to frame the other as a threat that can justify unilateral military interventions (for example, the alleged recent violation of Pakistan’s air space to pick up and execute an

⁵⁴ Walker et al. 2009.

⁵⁵ Biermann et al. 2010.

⁵⁶ Khosla 2007.

⁵⁷ Salomon 2009, 51.

⁵⁸ Chimni 2006.

⁵⁹ UNGA 2010.

⁶⁰ Rajagopal 2006.

⁶¹ See Chomsky 2004.

⁶² See almost all authors from the Third World Approaches to International Law School. See Diez 2005.

unarmed man, however, criminal he may be); second, to frame the other as inferior who needs to be civilized through universal norms and behavior patterns. Rarely is the “rest” framed as different from the West – therefore allowing for a multiplicity of approaches. Such framing has justified language used to control other countries.⁶³ Third, these approaches are promoted through processes that are ostensibly democratic and legitimate.

My eclectic approach also builds further on power studies that focus on decisions, non-decisions, and decision-less decisions, and argues that non-decisions and decision-less decisions often provide better insight about issues and interests that have become casualties of the policy process.⁶⁴

A Possible Method

Although there are no clear methods,⁶⁵ this chapter proposes and elaborates on the “TWAIL-GAP” approach that I developed for a previous paper⁶⁶ into a North–South GAP approach. The TWAIL-GAP approach takes the perspectives and rights of the South (the weaker party) more seriously⁶⁷ and puts them at the center of the enquiry. The North–South GAP approach is a comparative approach that examines governance processes from both Northern and Southern approaches. It provides a framework for analyzing Goals, Arguments, and Patterns (GAP) of results. First, the exercise is undertaken using a traditional approach to international relations.

Then the exercise is undertaken from a “Southern” perspective. Such a method begins by critically examining the key issues and Goals of the weaker party. The next step is to understand the extent to which these issues and goals are taken into account in the negotiation process by critically examining the Arguments and counter-arguments used. In doing so,

1. The arguments and counter-arguments need to be assessed in terms of the specific *levels* at which they apply (do they apply at ideological level, organizational level or are they specific to the issues being discussed).⁶⁸ In North–South discussions, the South often has an ideological counter-argument for a factual argument of the North and as the levels at which these arguments are being made are different, the Southern position is often dismissed as irrelevant.
2. Care should be taken to unpackage the *language* in which issues and arguments are packed. For example, how universal are “universalist” approaches,⁶⁹ is “voluntary” participation in a regime used as a pre-emptive strategy,⁷⁰ is the effort to dismantle the concept of the “South” simply a way to divide and rule the “rest?”⁷¹ Language is often used to hide bias and the literature argues that stronger parties will use language and rules of procedures to pacify others and preempt dissent.⁷² The researcher has to be able to penetrate this bias.
3. The *legitimacy* of the process of decision-making needs to be analyzed to examine if there are *de facto* challenges within a process that is *de jure* legitimate. For example, can a team

⁶³ Mickelson 2008, 358.

⁶⁴ Bachrach and Baratz 1970.

⁶⁵ Badaru 2008; Fakhri 2008; Okafor 2008; and Parmar 2008.

⁶⁶ Gupta 2011.

⁶⁷ Okafor 2005, 179.

⁶⁸ Gupta 1995.

⁶⁹ Sornarajah 2001.

⁷⁰ Gupta 2001.

⁷¹ Chimni 2006.

⁷² Sornarajah 2001; see also Okafor 2005.

of two negotiators really negotiate on behalf of a country when there are multiple negotiating sessions taking place? Furthermore, as systems of governance keep changing, it becomes more and more important to analyze whether these systems of governance meet the criteria of good governance.

4. The decisions, non-decisions and decision-less decisions that emerge need to be identified.⁷³
5. Finally, the arguments and processes need to be analyzed in a historical context and something that may appear *prima facie* fair may turn out to be unfair within an evolutionary historical context. Such an analysis will help to clarify if there is a Pattern of domination and inequity emerging from the negotiation process; whether this pattern repeats itself in different fields and in different time periods or not.

The above approach is based on testing the hypotheses that Western research models are inherently biased and will not necessarily expose the impacts on the weaker groups of countries, unless an explicit effort is made to take a Southern viewpoint.

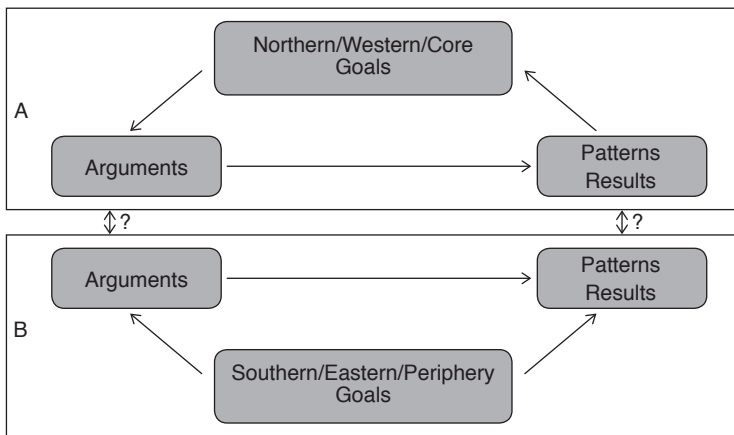


Figure 8.1 The North–South GAP analysis

The North–South GAP analytical method (Figure 8.1) could help to improve the international legal system and make it more fair in a post neo-colonial, post-hegemonic⁷⁴ world by putting the rest on a par with the West in research activities.⁷⁵

Conclusions

This chapter has focused on North–South issues at multiple levels of governance in the environmental field. It has argued that North–South issues are not *passé* but will remain critical shorthand for focusing on the challenges that emerge between the powerful and the powerless in environmental relations. In fact, as many Southern countries become more and more dominant players in the global arena, their perspectives will increasingly have to be taken into

⁷³ Bachrach and Baratz 1970.

⁷⁴ Rajagopal 2006.

⁷⁵ Okafor 2005, 179.

account. Furthermore, to the extent that Northern politicians take umbrage at the “neo-colonial” strategies of some Southern countries in other Southern countries, such approaches will become more important. Finally, to the extent that some Southern countries learn to play “Northern” games to their own benefit, the role of history and past action in determining current policies will become increasingly important.

This chapter has shown that globalization, development and the competition for resources and ecospace are exacerbating environmental and related equity challenges, providing yet another argument for researching into the impacts on the “rest.” It has argued that the shifts in the locus, nature, and actors of governance create new legitimacy challenges especially for weaker and less flexible parties. This chapter has argued that the nature of the North–South issue will be different in different issue areas. While in climate change the major North–South war is being fought in the global theater, subsequent battles will be at regional and local levels; in the area of forestry and water, the issues have a North–South dimension primarily at the local level, although they are being increasingly socially constructed at the global level.

Finally, this chapter has argued that in addition to the array of existing methods and approaches, it is important to develop a coherent method for analyzing North–South issues as an important and unavoidable step in the process of improving global governance. This North–South GAP (Goals, Arguments, Patterns) approach with its focus on understanding analytical levels, the use of language, the protection of legitimacy, the non-decisions and the historical context could provide an initial methodological tool for (a) testing whether there is a bias in global international relations research, (b) exposing such systemic and structural biases in the global environmental governance system if they exist and (c) finding ways to redesign governance systems to make them more appropriate for the twenty-first century.

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9 Environment, conflict, and peacebuilding

Richard Matthew

This chapter presents an overview of linkages among environmental change, violent conflict, and peacebuilding. I conclude that in many war-torn parts of the world, integrating natural resource management and climate change adaptation into peacebuilding processes would contribute to state and civil society capacity building, and also to the long-term prospects for social stability and development. The failure to do so, which has been the norm for the past two decades, may have been a factor in those cases in which peacebuilding fails and the state experiences a relapse into violent conflict. Since 1992, this has occurred approximately 50 percent of the time.¹

I begin with a brief overview of research that has linked environmental change to violent conflict and state failure. I then provide a short discussion of the key elements of peacebuilding. Drawing on personal experience with peacebuilding efforts in Sierra Leone and several other countries, I conclude that it is important to integrate natural resource management and climate change adaptation into peacebuilding processes regardless of where one stands on the environment–conflict argument.² Of course, if the latter argument is valid, then it adds a further layer of justification to the case.

Environmental Change and Violent Conflict³

Attempts to link environmental change to violent conflict are part of a broader attempt to link environmental change to security affairs. This latter effort has proceeded along two trajectories. The first involves redefining the term “security.”⁴ The second involves demonstrating that environmental change contributes to familiar security issues such as state failure and war.⁵ These two trajectories are not mutually exclusive, although they do have many points of friction.

Scholars operating along the first trajectory are themselves part of a broad effort that gained critical mass after the Cold War to reassess and, typically, replace the definition of “security” that was dominant during the twentieth century with something considered more reflective of the threats and vulnerabilities of the post-Cold War era. The conventional definition often finds its distant roots in “realist” thinkers such as Thucydides, St. Augustine, Machiavelli, and Thomas Hobbes, but it was largely informed by the remarkable interstate violence of the twentieth century, especially World Wars I and II, and later the wars associated with independence movements and decolonization and the proxy wars linked to the US–Soviet rivalry. Already by the end of the 1940s, the prospect of a major war involving nuclear weapons was widely regarded as the single greatest threat to the survival of much of humankind. In an

¹ Collier 2007; and UNEP 2009.

² I directed the field assessment phase of the first effort to formally integrate natural resource management into United Nations peacebuilding operations in Sierra Leone. A key output of that phase was the 2010 UNEP report entitled *Sierra Leone: Environment, Conflict and Peacebuilding Assessment*.

³ This section is updated and adapted from Matthew 2011.

⁴ Myers 1993; UNDP 1994; Deudney and Matthew 1999; Barnett 2001; and Matthew et al. 2010.

⁵ WCED 1987; Gleick 1993; Diamond 1994; Homer-Dixon 1999; Klare 2001; Bannon and Collier 2003; and Kahl 2006.

effort to reduce the likelihood of another world war, the United Nations Security Council was established in 1946 “to maintain international peace and security in accordance with the principles and purposes of the United Nations,” and it was authorized to take military action if necessary.⁶

As the world system transformed from one composed of states, kingdoms, empires and colonies into one made up primarily of sovereign states, the focus of security shifted decisively towards “national” or “state” security. Exemplifying the mentality underlying this shift, the United States passed the National Security Act of 1947 “to provide for the establishment of integrated policies and procedures for the departments, agencies, and functions of the Government relating to the national security.” Based on the assessment of a new generation of security experts that the gravest threats to the United States were the related possibilities of nuclear war and communist expansion, national security activity was focused largely on defining the military and intelligence capabilities necessary for preventing or winning a major war, and for deterring Soviet expansion and the use of nuclear weapons.

At the close of the twentieth century, the collapse of the Soviet Union raised questions about whether the twin threats of nuclear war and communist expansion had diminished enough to allow for a reconfiguring of national security strategy – and perhaps for the reallocation of some defense funds to other issue areas. These questions were bolstered by evidence that interstate war was in decline, and that late twentieth-century violent conflict was mainly civil, often long-lasting, and frequently difficult to end decisively, even with superior military force.⁷ In this context, a number of analysts began to look at threat more broadly to include phenomena such as economic crisis and infectious disease, and to suggest alternative frameworks for thinking about security such as the UNDP’s 1994 concept of “human security.”⁸

The process of rethinking security coincided with and soon embraced growing global concern about the social implications of environmental change. In particular, the Rio Summit on Environment and Development mobilized global attention around climate change, biodiversity loss and deforestation; emphasized the importance of national, regional, and global conservation strategies; and introduced a transformative vision that involved shifting the entire planet into the paradigm of sustainable development.

In light of the cascade of scientific information about environmental stress and degradation, a handful of scholars began to characterize environmental change as a security issue. Informing this argument was a pervasive and growing sense that human behavior was altering planetary ecology in ways that fed back into social systems as real threats to human welfare and safety: scarcity, disease, stress, and breakdown. Moreover, a combination of trends – demographic, economic and environmental – suggested the possibility of global catastrophe in the decades ahead.⁹ Although nature could survive any form of trauma, many species, including the human species, might not. Hence, proponents of this perspective concluded, addressing environmental change ought to be given the same high place on the global agenda, and the same extensive resources and commitment, that the threat of nuclear war had received in previous decades.

This argument was criticized by scholars such as Daniel Deudney, however, who worried that such a linkage might undermine important forms of global environmental cooperation, endorse an us versus them mentality, engage the military in areas where it would not be very

⁶ UNSC Website. Available at http://www.un.org/Docs/sc/unsc_functions.html.

⁷ Collier 2007.

⁸ Matthew et al. 2010.

⁹ WCED 1987.

efficient or effective, and perhaps even pull environmentalism under the veil of secrecy and misinformation typical of national security affairs.¹⁰

Although much scholarly attention has been focused on the pros and cons of redefining security, and the debate initiated by Deudney remains vibrant, the strand of analysis that has traveled most effectively into other parts of the academic terrain and also into the practitioner community has been focused on exploring the relationships between environmental change and national security. Paying tribute to thinkers such as the eighteenth-century demographer Thomas Malthus – who predicted that geometric population growth would exceed linear increases in food production, leading to famine, war, and disease – scholars have used both large *n* and case study methodologies to explore the ways in which environmental stress might contribute to violent conflict and state failure.¹¹ In its simplest articulations, this burgeoning field of inquiry has identified some compelling patterns of both scarce (water, farmland) and high-value (diamonds, oil) natural resources interacting in suggestive ways with social phenomena such as corrupt government behavior, maldevelopment, population displacement, and violent conflict.¹²

With regard to the latter outcome, the work of Thomas Homer-Dixon¹³ gained considerable attention in the 1990s. During this period, he led a team of researchers that studied the social effects of scarcities of water, cropland, and pasture. He concluded that when these types of natural resource become scarce in developing countries, a condition that can have multiple causes, the likely responses are quite volatile. These include resource capture, in which one group seizes control of the resource, and ecological marginalization, in which some people are forced to move into resource-poor lands. Both of these outcomes can trigger, amplify, or prolong violent conflict. In a complementary study, Colin Kahl¹⁴ linked resource scarcity to state failure (the collapse of functional capacity and social cohesion) and also to state exploitation (when a collapsing state acts to preserve itself by giving greater access to natural resources to groups it believes can prop it up).

Not all analysts are persuaded that these patterns are strong or typical, but they have nonetheless galvanized considerable debate and policy activity. As Thor Hanson et al. note in a 2011 article in *Conservation Biology*, “Over 90% of the major armed conflicts between 1950 and 2000 occurred within countries containing biodiversity hotspots, and more than 80% took place directly within hotspot areas.”¹⁵ However, while, based on a fair amount of empirical research, there appears to be a correlation between certain forms of environmental change such as sudden changes in water availability and violent conflict or state failure, the findings are still tentative and must compete with other variables that correlate nicely to disastrous social outcomes.¹⁶

In spite of its shortcomings, the literature linking environmental change to national security concerns has served as a platform for considerable speculation about the likely social effects of climate change, a problem that has received considerable attention, especially since the publication of the 2007 Intergovernmental Panel on Climate Change (IPCC) working group reports. Climate

¹⁰ Deudney and Matthew 1999.

¹¹ Gleick 1993; Myers 1993; Homer-Dixon 1999; and Kahl 2006.

¹² Collier 2007.

¹³ Homer-Dixon 1999.

¹⁴ Kahl 2006.

¹⁵ Hanson et al. 2011, 578.

¹⁶ Hauge and Ellingsen 1998; and Hanson et al. 2011.

science undertaken throughout the world by thousands of researchers has identified enduring changes in the distribution of water, increases in the intensity of severe weather events, longer heat waves, longer droughts, and sea-level rise and flooding.¹⁷ Some scientists have predicted that global warming will move the planet across critical thresholds causing black swan events such as sudden extinctions, massive gas releases, rapid glaciation, or microbial explosions.¹⁸

In affirmation of IPCC arguments, the 2009 report of the International Federation of the Red Cross and Red Crescent Societies (IFRC) notes:

The threat of disaster resulting from climate change is twofold. First, individual extreme events will devastate vulnerable communities in their path. If population growth is factored in, many more people may be at significant risk. Together, these events add up to potentially the most significant threat to human progress that the world has seen. Second, climate change will compound the already complex problems of poor countries, and could contribute to a downward development spiral for millions of people, even greater than has already been experienced.

Insofar as state failure is concerned, increases in the frequency and intensity of disasters are like cracks in a dyke as they shift scarce funds away from important activities such as building and repairing critical infrastructure, investing in education and skills development, and designing and implementing development and poverty reduction programs, and place these funds into emergency relief operations.

Complicating matters further, disasters can displace people into marginal environments and hostile communities, reinforce the blame-casting critiques of ideologues and extremists, narrow the opportunities for survival and upward mobility to things such as crime and corruption, and generate discontent that expresses itself through riots and other forms of civil disturbance. An overextended government, faced with tense social divisions and a miserable, angry and untrusting civilian population, might collapse.

Even more starkly, a handful of states could fail because much or all of their territory disappears under rising seas, a looming threat to the Maldives and some 40 other island states. Glacial outburst floods could cause similar devastation in countries such as India, Nepal, and Pakistan, and a change in the ocean conveyor could even cause developed countries such as the United Kingdom to disappear under several feet of ice within a few years. These likely and possible existential threats have become critical national security issues for a growing number of climate-sensitive countries. To underscore this reality, in 2010 the President of the Maldives held a cabinet meeting underwater. While tragic, not everyone agrees that state failure of this nature is a national security issue *per se*. Writing in *Foreign Policy* magazine, for example, realist thinker Stephen Walt¹⁹ has suggested that the concerns of climate science are better thought of as humanitarian challenges.

Nonetheless, a rather steady and impressive stream of experts and policy analysts has argued that climate change is likely to deepen and extend the environment–conflict linkage identified by Homer-Dixon and others. In 2006, for example, Sir Nicholas Stern estimated that as many as 200 million people could be displaced by rising sea levels, massive flooding, and droughts by the middle of the twenty-first century. The alarming tenor of this prediction was quickly endorsed through several high-level reports, including the CNA Corporation's 2007 publication,

¹⁷ IPCC 2007a.

¹⁸ Wilson 1999; and IPCC 2007b.

¹⁹ Walt 2009.

National Security and the Threat of Climate Change. Its authors concluded that “climate change acts as a threat multiplier for instability in some of the most volatile regions of the world.”²⁰ Further, they predicted that “projected climate change will add to tensions even in stable regions of the world.” The German Advisory Council on Global Change’s 2008 report, *World in Transition: Climate Change as a Security Risk*, argued that “Climate change will overstretch many societies’ adaptive capacities within the coming decades.”²¹ Analysts throughout North America and Europe have worried that climate change will add enormous stress to states that are already fragile, bolster violent conflict, increase population displacement, heighten vulnerability to disasters, and undermine development and poverty alleviation programs.²² Most at risk, these experts contend, are countries in South Asia, the Middle East and Sub-Saharan Africa, where vast populations of poor people and their shaky governments are ill-equipped to manage the effects of flood and drought.

Of course there has also been some well-conceived criticism of these hastily assembled, headline grabbing claims. Henrik Urdal, for example, contends:

[The] potential for and challenges related to migration spurred by climate change should be acknowledged, but not overemphasized. Some forms of environmental change associated with climate change like extreme weather and flooding may cause substantial and acute, but mostly temporal, displacement of people. However, the most dramatic form of change expected to affect human settlements, sea-level rise, is likely to happen gradually, as are processes of soil and freshwater degradation.²³

There is wide agreement that human behavior is changing land cover, reducing biodiversity, polluting air and sea, disrupting the hydrological science and forcing climate change. However, both assessing and predicting the social effects of environmental and climate change are difficult and controversial endeavors. This is especially true with regard to phenomena such as violent conflict and state failure, where causality may be the outcome of several weighty and interactive variables. Nonetheless, I believe that even faced with much uncertainty, a strong case can be made for integrating natural resource management and climate change adaptation into the very demanding, under-resourced and high stakes realm of peacebuilding.

The Elements of Peacebuilding²⁴

Over the last 20 years, peacebuilding has evolved as an important way of promoting sustainable peace and creating a platform for development in conflict-affected societies. Within the UN system, it is understood as consisting of a wide range of activities that together seek to provide basic security; build the capacity of the national government and civil society; encourage socioeconomic recovery and growth; and address the conditions, attitudes, and actions that drive violent conflict in order to prevent its recurrence.²⁵ It is a 5–10-year process that typically occurs after peacemaking (that is, diplomatic efforts to broker a peace agreement) and peacekeeping (that is, the dispatch of military forces to monitor and implement a peace

²⁰ CNA 2007.

²¹ German Advisory Council on Global Change 2008.

²² Campbell 2008.

²³ Urdal 2008.

²⁴ This and the subsequent section are informed by work carried out with Anne Hammill. Part of this section is adapted from Matthew and Hammill 2010; and also from work still in draft form.

²⁵ UNEP 2009.

agreement), although the lines separating the phases of the peace process are neither permanent nor impermeable. For example, the dialogue established through international diplomacy for the peacemaking phase may be needed during later phases.

The timeframe for peacebuilding is always a matter of at least a few years, and so attention must be given to managing expectations on all sides and laying the foundations for a transformation process that can eventually be placed fully in the hands of the country itself, while the country continues to evolve toward a condition of stable peace and sustainable development. Thus, the focus of peacebuilding tends to be more on capacity development than on designing and implementing discrete problem-solving projects. The Organization for Economic Cooperation and Development (OECD) has defined capacity development as “The process by which individuals, groups and organizations, institutions and countries develop, enhance and organize their systems, resources and knowledge; all reflected in their abilities, individually and collectively, to perform functions, solve problems and achieve objectives.”²⁶

The 2004 Utstein study of peacebuilding, which is reiterated in the OECD’s own conceptualization of peacebuilding, offers a useful framework for understanding what peacebuilding looks like on the ground. In these two reports, peacebuilding activities fall into four different, but mutually reinforcing, areas of intervention:²⁷

1. *Socioeconomic development*, where the focus is on socioeconomic drivers of conflict such as wealth distribution, marginalization of particular social groups or geographical areas, environmental degradation, and competition over natural resources. Specific activities might include repatriating and reintegrating displaced persons; constructing or repairing infrastructure as well as rehabilitating key government functions (for example, water and sanitation); developing and providing longer-term public services such as education and healthcare; and stimulating productive sector development, employment, trade, and investment.
2. *Good governance*, which is concerned with consolidating the legitimacy, capacity, and effectiveness of key institutions in the country. Activities under this category include capacity development for civil society; media development; transparency, accountability, and anti-corruption programs; and various democratizing initiatives such as promoting elections, power sharing, and participatory processes.
3. *Reform of justice and security institutions*, which focuses on the protection and provision of state and personal security. This is typically achieved through programs that support disarmament, demobilization, and reintegration of former combatants into local communities; small arms control; humanitarian mine action to clear mines, destroy existing supplies, support victims, and raise awareness about the continued risks and impacts of landmines; and security sector reform to rebuild and improve the security and justice apparatus of a country, including its military, police, judiciary, and penal services.
4. *Culture of truth and reconciliation*, which promotes processes that encourage dialogue, peaceful resolution of disputes, healing, and justice.

These pillars of peacebuilding (Table 9.1) are not internally monolithic. The priorities and needs within each pillar vary throughout a society, and one needs to carefully consider and

²⁶ OECD 2007.

²⁷ Smith et al. 2004.

Table 9.1 Four pillars of peacebuilding

Socioeconomic development	Good governance	Reform of justice and security institutions	Culture of truth, justice and reconciliation
Balanced physical reconstruction	Civil society development	Security sector reform (police, military, intelligence)	Enhancing non-violent dispute resolution systems
Sound and equitable economic management	Freedoms of expression association, press	Small arms and light weapon reduction	Dialogue among conflicting groups
Equitable distribution of development benefits	Power sharing	Nonviolent accompaniment	Prejudice reduction or diversity training
Gender equality	Participatory processes	Community policing	Trauma healing
Equitable access to services	Improved access	Peacekeeping	Conflict resolution skills training
	Democratization	Nonviolent observers	Peace education
Repatriation/reintegration of displaced persons	Electoral processes	Disarmament, demobilization and reintegration of combatants	Transitional justice
	Transparency and accountability		War crime trials
Sustainable use of (and equitable access to) natural resources	Anti-corruption and good governance programs	De-mining	Reparations
	Human rights protection		
	Rule of law		

Source: UNEP 2009.

manage differences and continuities across national, provincial, and local levels of political, economic, and social organization. Moreover, while the United Nations is obliged to devote considerable attention to the national government, it is generally acknowledged that a successful peacebuilding process requires both a competent state and an empowered and engaged civil society. And all of this must be done in the complicated context of a society that may be deeply divided, fearful, and suspicious; a government that may be quite corrupt; pressure from highly motivated peace spoilers who have found ways to benefit from conflict and lawlessness; massive data gaps that introduce uncertainty into decision-making and planning in many sectors; destabilizing regional dynamics; and urgent humanitarian needs.

Integrating Natural Resource Management (NRM) and Climate Change Adaptation (CCA) into Peacebuilding Operations

Peacebuilding is about identifying immediate priorities and developing a plan for national reconstruction. This typically involves kick-starting the economy and restoring livelihoods; empowering youth and women; settling returnees and internally displaced people; disarming combatants, professionalizing police and military personnel, and making people feel safe again; rebuilding critical infrastructure; providing opportunities for truth and reconciliation; reducing the likelihood of a relapse into violent conflict; and building the government and civil society capacities needed for enduring peace and sustainable development. Natural resources have been carefully identified as critical to many aspects of the peacebuilding process.²⁸ They can support economic recovery, help to develop sustainable livelihoods and can contribute to dialogue, cooperation, and confidence building.²⁹ Failing to integrate NRM and CCA into formal peacebuilding operations and national reconstruction plans, this argument suggests, has the potential to undermine security and development efforts and exacerbate conditions that contribute to violent conflict. It is therefore critical to modify current peacebuilding approaches and priorities so that societies are able to manage natural resources sustainably and cope with the additional stress of climate change impacts (Figure 9.1).

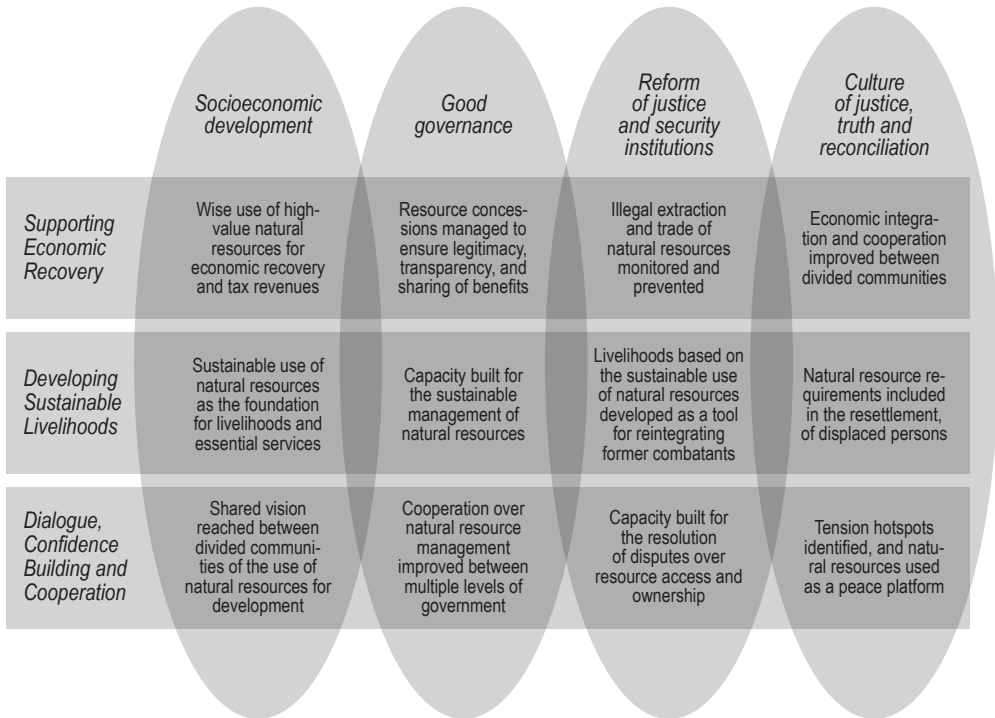
I argued above that the case for linking environmental change and climate change to security issues is robust but imperfect. This is partly because there remains considerable uncertainty about how these linkages play out in different social contexts, and partly because the term “security” is loaded with expectations and preferences that some analysts find worrisome. A further complicating issue is that environmental change and climate change are remarkably protean science-based discourses, with admixtures of confidence and uncertainty that allow them to be integrated into any political agenda – from calls for sweeping reforms of the international system to calls for more research and debate. From this perspective, environmental change and climate change may not mobilize agreement or clarify choices so much as engender reflection on the values we hold, the levels of risk we are comfortable assuming, the strengths and weaknesses of the institutions and practices that exist to meet our personal needs and allocate our shared resources, and the sort of world we want to bequeath to our children and grandchildren.

The case for integrating NRM and CCA into peacebuilding is, on the other hand, very compelling, regardless of how one assesses the linkages between environmental change and climate change and various security issues. This might best be illustrated with a brief example.³⁰ Between 2008 and 2010 I made several trips to Sierra Leone to examine for UNEP and UNDP the ways in which neglect of NRM and CCA might place the peacebuilding process at risk, and ways in which attention to NRM and CCA might bolster the process. It is well-known that the decade-long conflict involved natural resources from the outset, as the diamond mines of eastern Sierra Leone were the first major target of the Revolutionary United Front (RUF), which they took and held until 1995. Armed and sustained by the sale of diamonds to Liberia’s President Charles Taylor and his regime, the brutal tactics employed by the RUF left war victims with severed limbs, thousands of child soldiers, and wrecked communities. During the war

²⁸ UNEP 2009.

²⁹ UNEP 2009, 13.

³⁰ This case is adapted from the UNEP 2010 report for which I was the lead author.



Note: The Donor Assistance Committee of the OECD has identified four major pillars of peacebuilding. These include socioeconomic development, good governance, reform of justice and security institutions, and promoting a culture of justice, trust and reconciliation. This figure demonstrates how the three environmental opportunities for peacebuilding discussed in this report are linked to each of these pillars.

Source: UNEP 2009; adapted from OECD DAC 2008.

Figure 9.1 Integrating natural resource management into peacebuilding

enormous damage was done to both the natural and built environment. Forest cover was decimated, fisheries were plundered, water systems were destroyed, farms were left fallow, and unregulated artisanal mining was carried out all over the country. Five years after the war ended, conditions in the environment and natural resources sector had not improved. The stress related to water scarcity, degraded forest cover, and damaged infrastructure was aggravated by – and contributed to – massive unemployment among youth, severe poverty, and regional instability. Further complicating matters was a tremendous gap between the expectations of the population and what the government and other actors could deliver as in the peacetime agricultural and mineral sectors. The social unrest related to unmet expectations was amplified by the continuing lack of transparency and accountability in natural resource allocation and land-use decisions. Sierra Leoneans believed that the benefits of the country's natural wealth, which were typically overestimated, were being unfairly allocated, a belief that might reasonably be described as accurate. These perceptions have led some mining communities to conclude that the only way to publicize their grievances is through public protest and potential acts of violence. This view

was bolstered by the December 2007 riots in Kono, which quickly drew the attention of the government and international community and resulted in a reassessment of allocation processes and substantial promises of policy change. In short, because NRM after the civil war was opaque and provided few opportunities for participation, tensions grew around activity in this sector.

Moreover, opportunities to strengthen peacebuilding through sustainable NRM and CCA were ignored. Measures that might have been pursued, and that were recommended in the 2010 report and are now being implemented, include:

- making sustainable livelihoods a development priority;
- improving participation and consultation;
- improving environmental governance capacity at the national and local levels; and
- enabling the joint management and planning of water, forest, and agricultural resources.

Conclusions

My personal experience with the peacebuilding process in Sierra Leone suggests that to succeed, the integration of NRM and CCA into peacebuilding needs to be cognizant of several factors. First, when social systems collapse due to violence and disaster, there is not a clean slate upon which to rebuild. On the contrary, peacebuilders enter a very complex situation. Demographic pressures are likely to be intense as large numbers return and families that have suffered losses act to rebuild. Trust is likely to be very low. Efforts to fight corruption and introduce participation and transparency into governance institutions and processes, and to professionalize police and legal systems, may fail to engender much support and enthusiasm from the public. Security may be closely linked to roles and livelihoods typical of the pre-conflict period, even though environmental stresses may have rendered these unsustainable. The legacy of the conflict will also include coping behaviors that are difficult to change, deals struck during the conflict, and significant losses of technical and operational governance capacity. Transnational pressures may also be considerable.

In this context, several things seem especially important. First, peacebuilding is hampered when social divisions (such as ethnic, political, and rural/urban) remain intact. The importance of building bridges across such divisions, thereby creating conditions for debate and deliberation, and also for encouraging and mobilizing a shared sense of what needs to be done, tends to be ignored or denied. In various peacebuilding contexts people frequently feel excluded from the process, unable to help shape it and unaware of the big picture.

Second, and related to the first is the need to encourage greater participation in problem solving. A peacebuilding situation involves a steady stream of problems to be solved. Often these seem to be parceled out among major players: the EU, the World Bank, the UN, and so on. While this has some obvious benefits, it can also result in missing opportunities to collaborate and innovate.

Third, there is tremendous pressure on peacebuilders to deliver immediate, tangible results. But it is often not at all clear what will work to do things such as create jobs for youth, build trust, connect villages to markets, and so on. There needs to be more room for experimentation. Pilot projects should at times be designed and implemented with the knowledge that some will fail, but that focused failure is not bad when one does not know what will succeed.

In conclusion, arguments linking environmental change and climate change to violent conflict and state failure are compelling but still inconclusive. They provide a sufficient justification

for integrating NRM and CCA into peacebuilding operations, but not a necessary one. This case can also be made with reference to several of the explicit goals of peacebuilding. It is therefore important that the early efforts at integration be carefully assessed and improved, and that future efforts be supported.

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10 The comfortable lie? Another look at natural resource scarcity and armed conflict

Indra de Soysa

The idea that increased demands on the natural environment lead to social breakdown is widely accepted. The former Secretary-General of the United Nations, Kofi Annan's "High Level Panel on Threats, Challenges and Change" suggests very clearly that "[e]nvironmental stress, caused by large populations and shortages of land and other natural resources, can contribute to civil violence."¹ Successive reports by the Intergovernmental Panel on Climate Change (IPCC), the United Nations Environment Program (UNEP), and a high-level German Government Advisory Council report (WBGU) make very similar claims on what seem to be rather weak grounds.² Several scholars also weigh in, providing both theoretical and empirical detail about how resource scarcity drives conflict.³ The relatively recent focus on climate change has certainly increased attention on resource degradation and scarcity as a security issue.⁴ The growing belief that climate change and increasing scarcities are a security challenge is reflected in the recent Nobel Peace Prizes awarded to Wangari Maathai, Albert Gore, and the IPCC.⁵ Gore also won an Oscar for his documentary *An Inconvenient Truth* which paints a dramatic picture of the security implications from global warming, such as mass influx of "climate refugees" from the South to the North. Contrary to these popularized beliefs, this chapter will demonstrate that the evidence for natural resource scarcities and armed violence is very scarce and the theory thin. The evidence for poverty and conflict to be part of a resource curse driven by abundance of resources and bad governance is much stronger, and theory better specified than for the view that people carry out mass violence because they merely lack stuff. In other words, the natural environment is not likely to be destiny for many places, but getting policy right will make all the difference. Taking care of our planet is a good in its own right, but securitizing the issue in terms of neo-Malthusian arguments generates more heat than it does light.

This chapter will show that it is the relative abundance of natural wealth that affects economic and political governance – the so-called "resource curse." As such, whatever the environmental scarcities faced by people, much of the problem of poverty and violence can be solved by conscious policies, particularly in the realm of local and global governance.⁶ It is the developmental and governance traps, or lack of "institutional capital" that leads to persistent

¹ United Nations 2004, 15.

² WBGU 2008. See respective websites for various publications: <http://www.ipcc.ch/> and <http://www.unep.org/>. Several scholars have documented the nature of the hype around climate, resources, and security (Salehyan 2008; and Katz 2011).

³ Renner 1996; Homer-Dixon 2000; Klare 2001; and Diamond 2005.

⁴ For an excellent review of arguments around security concerns due to growing scarcity, see Matthew 2008. For excellent evaluations of the security implications of climate change, see Nordås and Gleditsch 2007; and Salehyan 2008.

⁵ Naturally, the nongovernmental organization (NGO) and activist community are particularly taken with this view, with major UN agencies, such as UNEP and the United Nations Development Program (UNDP), taking the lead.

⁶ Environmental degradation and overuse of resources should be addressed by global and local policies on their own right as serious policy issues, but the question of stopping armed violence may require other policies entirely.

poverty, human insecurity, and continued dependence on natural resources.⁷ This chapter will highlight how factors associated with globalization and the transformation of the Cold War international arrangement might be mitigating the adverse policy failures often attributed to the scarcity of natural resources, or its abundance, by allowing the build-up of better institutional capital through processes of international norm diffusion and conscious global and local governance.

The one region where the risk of conflict rose steadily during the Cold War years but has seen a decrease until recently, is Sub-Saharan Africa, which I examine in closer detail in the next section. Africa is the region where the issue of natural resource scarcity and abundance has been hotly debated in past years. As several have argued, parts of Africa apparently face the toughest conditions of resource scarcity and climatic change, where these factors coalesce with economic depression and bad governance.⁸ Contrarily, others argue that the risk of African conflict can be attributed to relative abundance of natural wealth, rather than its scarcity.⁹ Yet again, others, while agreeing that social grievances driven by scarcity were unlikely to cause large-scale violence, argue what mattered was how politics and state policies channeled the “curse” of natural wealth, and that problems were likely due to “political Dutch Disease” because of reliance on high-value resources, such as oil and diamonds. But how might the recent trends in conflict speak to the debate on scarcity versus abundance?

As this chapter will argue, areas such as Sub-Saharan Africa and Latin America have seen massive improvements in their political climates, whereas those countries still suffering conflict are precisely those plagued by both bad governance and dependence on lootable resources, particularly oil (Algeria, Nigeria, Chad, the Democratic Republic of Congo (DRC), and Sudan).¹⁰ While recent demand for African resources, due in large part to the growth of large countries, such as India, Brazil, and China, has driven up the value of African resources, African states have also dramatically transformed how they relate to their populations. It still remains to be seen, however, whether the wealth from resource exports will be deployed in beneficial ways for long-term development, but the healthy development of institutional capital in recent years relative to during the Cold War provides some reasons for hope. There is mounting evidence that getting institutions and economic policies right makes all the difference for peace and development.¹¹ The empirical evidence for these assertions is presented below. First, this chapter will examine theory and empirics around natural resources and conflict, followed by a hard examination of some recent trends in the security and governance environments around the world, with a particular focus on Sub-Saharan Africa where the problems of environmental change are ostensibly likely to be most pronounced according to neo-Malthusian arguments.

Nurture, Not Nature!

Before I discuss how globalization promises poor countries an avenue for reducing human insecurity, relative to what was possible during the bipolar period of the Cold War, what about

⁷ What I mean by “human security” is insecurity to societies caused by physical violence. This sort of insecurity can be affected by global governance and conscious policies both locally and globally. Naturally, human insecurities are caused among other things by scarcity of food and water, but I focus on whether such shortages can cause the type of insecurity that requires global policy intervention as opposed to intervention by local authorities.

⁸ Markakis 1998; Homer-Dixon 1999; and Suliman 1999.

⁹ Collier et al. 2003.

¹⁰ Of course, conflicts in the horn of Africa, such as in resource-poor Somalia, also continue unabated.

¹¹ Easterly 2006; Mousseau and Mousseau 2008; de Soysa and Binningsbø 2009; de Soysa and Fjelde 2010; and de Soysa 2011.

ecological conditions? According to many, poor countries are poor and insecure because nature has been unkind to some.¹² Many empirical studies find that developed states are resilient to shocks. People are resilient to natural disasters as well as short-term economic shocks. Wealth is good beyond simply allowing higher consumption. Development also may mean that risks are mitigated with the application of capital and technology and superior organization.¹³ Consider that the same hurricane that hits Florida and Haiti has far different consequences for the two societies that inhabit these two territorial entities.¹⁴ Thus, produced wealth is insurance that increases human welfare far beyond simple consumption. The usual way of gauging the level of development is per capita income. Recently, neo-Malthusian views that link poverty to the unkindness of nature suggest that poor countries are trapped in a vicious cycle of poverty, underdevelopment, and insecurity because they lack natural resources to overcome social risks. Neo-Malthusians connect poverty in developing countries to the lack of environmental resources. Poverty, a degraded planet, and environmental scarcity are supposedly mirroring poor countries in a conflict–poverty trap.

Thus, with increased global climate change, poor countries are likely to suffer increased vulnerabilities.¹⁵ These vulnerabilities lead to social frictions that inhibit development. Indeed, climate change is supposed to increase the risk of conflict by affecting scarcities because unpredictable weather will affect food production and because increasing severe weather will cause social disarray and violence.¹⁶ Some empirical studies have shown that climate change that affects African agricultural production will indirectly cause violence because of lower food production.¹⁷ Others find that these results are not robust, nor the explanations sufficiently grounded in the political and social realities of African conflicts.¹⁸ There seems also to be very little evidence for water wars, despite the fact that this aspect of climate and conflict is most hyped in the media and elsewhere.¹⁹ Nor does there seem to be any tangible connection between natural disasters, particularly weather-related disasters, and civil violence of any consequence.²⁰ Indeed, there is a long tradition of research in disaster sociology in particular that shows how disasters tend to bring people together for solving collective dilemmas rather than for organizing costly violence.²¹

The link from climate change to conflict, whether it is gradual weather change or sudden shocks from wild weather, is that scarcities make humans fight. The weight of the evidence on natural resource availability and conflict, however, is exactly the opposite. Most poor people in the poorest countries live with massive scarcities, both in absolute and relative terms. These scarcities are often overcome with policies aimed at alleviating them. Consider the massive poverty alleviation of the past years in just India and China alone due to simple policy changes. Consider, however, how much environmental wealth has been wasted as part of the resource curse in places such as Africa and Latin America, where countries that extract natural wealth

¹² Meadows et al. 1993; and Homer-Dixon 2000.

¹³ Wisner et al. 2004.

¹⁴ The devastation of New Orleans by Hurricane Katrina shows that even relatively wealthy places are not immune if governments have been lax and where preparation has been weak. Floridians have learnt the hard way over time as I am sure Louisianians will in the future.

¹⁵ Homer-Dixon 1991; and Homer-Dixon and Blitt 1998.

¹⁶ Scheffran and Battaglini 2011.

¹⁷ Burke et al. 2009.

¹⁸ Benjaminsen 2008; Buhaug 2010; and Sutton et al. 2010.

¹⁹ Katz 2011.

²⁰ Slettebak 2012.

²¹ Fritz 1961; and Quarantelli and Dynes 1976.

have suffered the worst economic and political maladies. These conditions have also kept many places underdeveloped, thereby costing current and future generations the benefits of using resources wisely for diversifying away from dependence on the natural environment and building up wealth and resilience.²² There is little evidence to suggest, apart from petroleum, that natural resources are becoming increasingly scarce globally, and that various forms of technology are not displacing the importance of resources over time.

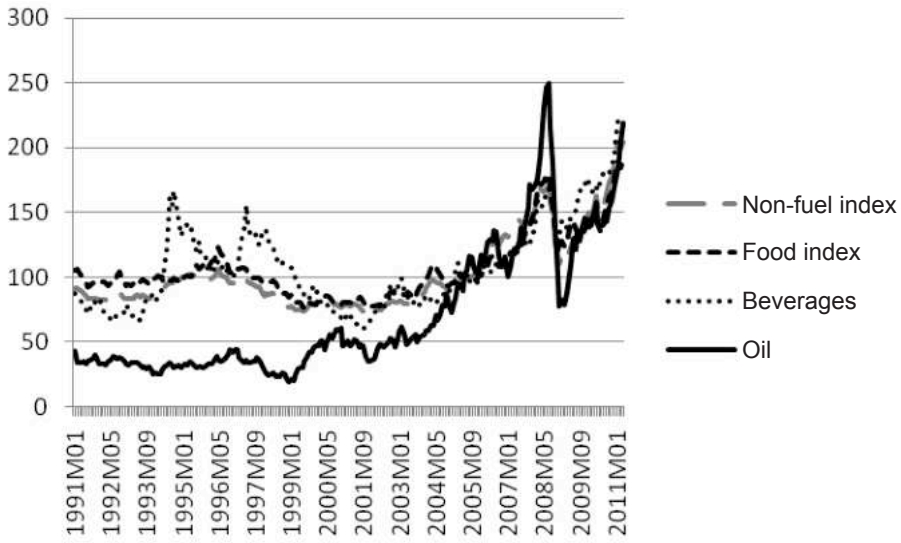
Figure 10.1 shows the trend in the prices of several categories of commodities, including energy (oil), food, beverages, and non-fuel commodities for the past two decades. As seen there, almost all commodities have been largely under the 100 benchmark for most of the past two decades, bumping up with the spike in oil prices, increasing steadily from about 2005 onwards, the benchmark year.²³ Note that beverage prices, despite the discussion about the lack of water, have been steadily decreasing since the early 1990s to bump up again with other commodities. In fact, if one were to look at the longer-term trend in prices, the recent upward swing is nothing compared to high prices for food and beverages if one compares prices of food and beverages in the 1960s. The cost of food relative to wages is also probably much lower today than historically. If the world has been suffering growing scarcities, it is not clearly reflected in prices, which have only recently gone up due to rising demand from high-growing large countries, such as India and China and due to the rise in energy prices, which affects all other categories of commodities because of the importance of energy as an input in food production and for harvesting resources. Indeed, there are many other political economy explanations for the volatility of food prices besides the effects of climate change.²⁴

While commodity prices tell us something about supply and demand, and global market conditions, complicated by the fact that the inputs to extraction and food production, such as energy, are linked, it is not as clear an indicator of production difficulties as is the crop production index. If the climate, and not the political economies of countries, determines production failure, then a crop production index is the right gauge by which to track how production of food is affected by rising temperatures. The crop production index shows year to year change in production of crops relative to a base year. As seen in Figure 10.2, agriculture production has been rising everywhere since the 1960s, and surprisingly, the Middle East and North African region (MENA), which is one of the driest and most hostile regions for agricultural production, tops the index. This factor says something about the diffusion of global technology in production of agriculture. Indeed, Sub-Saharan Africa and Latin America are above the global average. If the climate alone mattered, such a trend in agricultural production is somewhat of a mystery, and mysterious still would be how, in fact, rising production on the farms maps onto rising conflict if there was a simple connection between inability to produce agricultural goods because of climatic conditions with conditions that generate conflict. It seems that as Amartya Sen argued decades ago about famine, people do not die because of the lack of production but distribution. In which case, the rich world's continued lack of enthusiasm for free trade in agriculture points to the political economy of global market conditions that keep

²² Dietz et al. 2007.

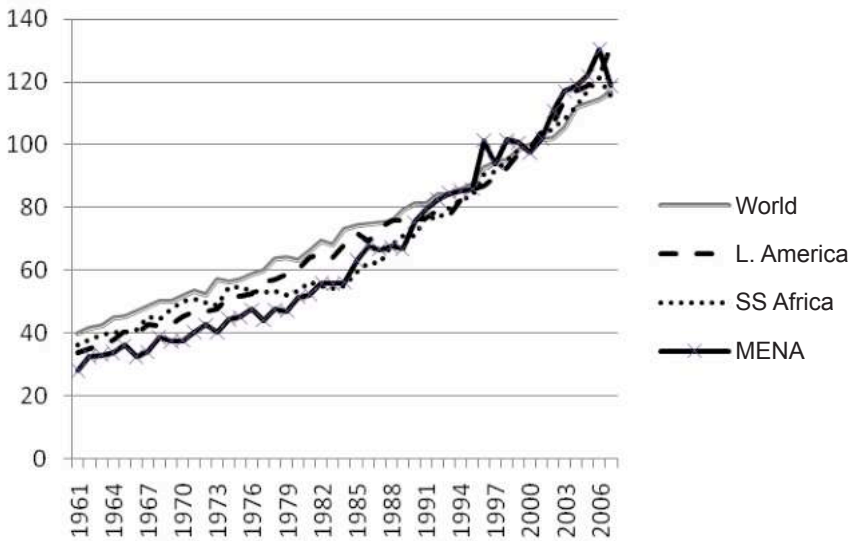
²³ The prices for all commodities are benchmarked at 100 in 2005. According to the IMF, their "indices are based in 2005 average of 2005 = 100. We first calculate individual commodity price indices in US dollar and SDR terms, basing the price series in those currencies in 2005. Group indices are weighted averages of individual commodity price indices, with respective commodity weights derived from their relative trade values compared to the total world trade as reported in the UN Comtrade database." See www.imf.org.

²⁴ See Paalberg 2010.



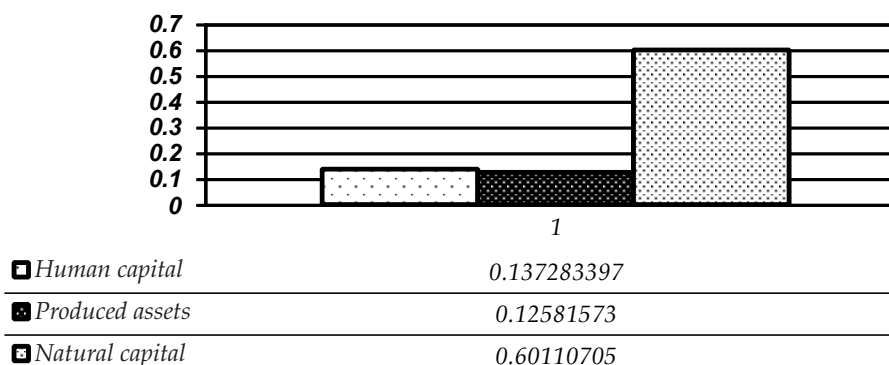
Source: International Monetary Fund (IMF) www.imf.org. Figure generated by author.

Figure 10.1 *Disaggregated price index (monthly) for food, beverages, non-oil, and energy, 1991–2011*



Source: World Development Indicators (World Bank 2010). Figure generated by author.

Figure 10.2 *Crop production index (all crops except fodder), 1960–2007 (index base 100 in year 1999–2001)*



Source: Figure generated by author.

Figure 10.3 Poor countries' average per capita share of natural, produced, and human capital relative to the richest countries

the poor in poverty and not necessarily their production capabilities in agriculture. The rather expensive and plentiful chocolates in our stores in the West, remember, are grown in Africa. I shall return to this distribution rather than production problem in the conclusion.

It does not seem either that poorest countries lack "stocks" of natural wealth relative to the richest countries. The World Bank recently estimated the contribution of natural, human, and physical capital to the total wealth of about 100 countries as part of its "Green Accounting" programme.²⁵ These estimates allow us to see what kind of capital the poorest countries defined as the World Bank's "low-income" group, lack relative to the highest-income countries. As Figure 10.3 shows, what the poor countries lack relative to the richest are clearly human and physical capital, not natural capital. Despite having on average roughly 2 percent of the income per capita of the richest countries, the poorest countries have more than 60 percent of the natural capital stock relative to what the richest countries possess. In other words, what Angola or the DRC lack relative to Belgium or Portugal is not nature's gifts in terms of natural wealth, but man-made capital, physical, human, and perhaps institutional, all of which make up the largest share of wealth. As Adam Smith noted several centuries earlier, wealth is generated by the productivity of labor. The recent price hikes for those commodities poor countries export will benefit them enormously, but much will depend on how these resource exporters deploy the rents from these favorable conditions.²⁶

While natural resource scarcity, thus, might be viewed with some caution as an explanatory factor for underdevelopment and social peace, scholars find recently that "greed-driven" factors are more powerful than "grievance-driven" factors for explaining the outbreak and continuation of organized armed violence.²⁷ If resource scarcity drives high grievances because governments cannot provide for citizens as scarcity arguments suggest, then theories that explain conflict do not support such a view. Several key findings within the theoretical and empirical literature on civil conflict point to state and social capacity as crucial for preventing greed-driven forces

²⁵ See <http://lnweb18.worldbank.org/ESSD/envext.nsf/44ByDocName/GreenAccountingAdjustedNetSavings>.

²⁶ Auty 2001a; and Kolstad and Wiig 2009.

²⁷ De Soysa 2002; Collier et al. 2003; Fearon and Laitin 2003; Collier and Hoeffler 2004; Ross 2004b; and Collier et al. 2009.

from resulting in conflict. The main assertions of this literature are based on the key finding that extractable wealth in terms of large natural resources (relative abundance) provide the payoff for organizing large-scale violence and makes it feasible.²⁸

As some argue, conflict is not universally harmful, but a few can “do well” out of organizing civil war.²⁹ Since the provision of justice is a “public good” altruistic individuals rarely spring up to serve justice by bearing all the costs of organizing rebellion. Groups organize for violence because of private gain. Likewise, peace is a public good, which often prevents the majority from organizing for peace, which can be very costly. According to the theory of collective action, larger groups are harder to organize than smaller groups because the payoffs are more concentrated the smaller the size and because free riding can be monitored more effectively.³⁰ However, given the destruction caused by conflict, people who are productive in society have the necessary incentive to organize for peace, yet they cannot because of free riding. The more society stands to lose the easier will be the organization for solving collective action problems – this is the main message in the burgeoning literature on social capital, and perhaps also explains why developed societies are resilient to shocks.³¹ Higher levels of development raise the payoff for maintaining peace and strengthen social and state capacities for providing the public force necessary to check socially harmful behavior.³² Yet, this is difficult if indeed the payoff to organizing violence is high and finance for it is available – where concentrated benefits, such as oil, drugs, and diamond mines, and illegal drugs, exist for capture. Northern Mexico in recent years has witnessed levels of violence greater than some of the fiercest civil wars, mainly because the massive payoffs from smuggling drugs and financing the purchase of arms makes violence feasible, whatever the grievances of the people caught up in the mayhem might be.

The finding that resource wealth is related to greed-driven conflict is key. Resource wealth does not only provide lootable income to private actors, but it leads to semi-private states, or what some call “shadow states.”³³ Shadow states, by their very nature, are states that are captured by a few private interests. Moreover, the nature of the economic payoff, or viability of the state, provides the rationale for institutional development and strength. A convenient resource stream, such as extractable mineral wealth, leads to withering of institutions around the collection of taxes, thereby weakening the social contract necessary for building a tax base from society. Such processes lead to weak states that will be disinterested in providing the optimal level of public goods, which will ultimately erode social and human capital.³⁴ Resource wealth also allows states to close their economies and practice industrial substitution policies, which some have referred to as “precocious Keynesianism” for state building along nationalist lines.³⁵ This according to others is the “natural resource curse” that seems to be at the heart of some of the social ills facing many poor countries.³⁶ Moreover, all these pernicious effects form a powerful cocktail that leads often to state and social disarray, violent civil wars, and continued marginalization of poor countries – what Paul Collier has termed “the bottom billion.”³⁷

²⁸ Berdal and Malone 2000; Collier 2000b; de Soysa 2002; and Ross 2004.

²⁹ Collier 2000a.

³⁰ Olson 1965.

³¹ Putnam 1993; and Varshney 2001.

³² Bates 2001; and Fearon and Laitin 2003.

³³ Karl 1997; Reno 2000; Bates 2001; and Kaldor et al. 2007.

³⁴ Woolcock et al. 2001.

³⁵ Waldner 1999.

³⁶ Ross 1999; and Auty 2001b.

³⁷ Collier 2007.

There is, however, nothing automatic about resource wealth that leads to disarray, as the development of Botswana, Norway, or Canada prove. The problems can often be corrected by policy and institutional innovation.³⁸ In an age of globalization, the technology and capital required for diversification of economies away from dependence on monoculture development is available to a greater extent than ever before, which is promising. Thus, systemic factors under conditions of globalization are also better today for making resource-led development less pernicious than what was possible during the Cold War. Some studies find much evidence to suggest that increased economic openness lowers corruption, raises the incomes of the poor, and raises the political standing of workers and general human rights.³⁹ Importantly, the degree of economic openness also seems to condition the effect of natural resources towards better respect for human rights, whereas resource wealth alone tends robustly to increase political repression and politicicide.⁴⁰ Thus, globalization may have an important conditioning effect on the resource curse, net of its influence on economic development.

Resource-wealthy states are prone to conflict despite higher levels of per capita income, generally speaking (such as some Middle Eastern states; that is, Saudi Arabia). We argue that the evidence within the recent empirical work on civil conflict, which demonstrates that natural resources and weak institutions are intimately related to the ways in which social technologies of peace erode, supports the argument that globalization should work towards supporting civil peace. In this sense, trade and investment and continued globalization will allow state (institutional) and social capacities (informal institutions) for developing, creating the webs of interdependence required for stable peace between states, within regions, and within states.⁴¹ We view this both as supply driven through state institutions and demand driven by organizational abilities of social forces from below.

The conditions of globalization are driven by increased trade between states and across regions. Growing trade is also supplemented, supplanted, and complemented by foreign direct investment (FDI) and liberal ideas of economic freedom, or the institutional and policy bases of greater capitalistic freedoms. These aspects are generally seen as the hard drivers of globalization.⁴² Today, poor countries, which were once against global liberalism, have changed their minds,⁴³ a point exemplified most clearly, in the economic realm at least, by the Chinese and Indian policy changes, Vietnam, or even Cuba.⁴⁴ What poor countries lack is capital and technology for improving their trading position, diversifying away from primary commodity dependence, and creating the necessary economic growth. Globalization helps since trade and investment benefit economic growth.⁴⁵ Trade dependence and FDI may improve conditions of human rights,⁴⁶ social conditions facing labor,⁴⁷ environmental conditions and economic sustainability,⁴⁸ and even

³⁸ Auty 2000; Mehlum et al. 2006; and Kolstad and Wiig 2009.

³⁹ Dollar and Collier 2001; Gerring and Thacker 2005; Neumayer and de Soysa 2006, 2007; and de Soysa and Vadlamannati 2011.

⁴⁰ Kisangani and Nafziger 2007; and de Soysa and Binningsbø 2009.

⁴¹ Russett and Oneal 2000; and Weede 2004.

⁴² Keohane and Nye 2000; de Soysa 2003; and Simmons et al. 2004.

⁴³ Krasner 1985.

⁴⁴ Clapham 1995.

⁴⁵ Bhagwati 1999; Collier and Gunning 1999; de Soysa and Oneal 1999; Srinivasan and Bhagwati 1999; and Dollar and Kraay 2000.

⁴⁶ Apodaca 2001; Richards et al. 2001; and Busse 2004.

⁴⁷ Garrett 1998; and Neumayer and de Soysa 2004, 2005.

⁴⁸ Yu 1994; Garrett 1999; and de Soysa and Neumayer 2005.

internal peace.⁴⁹ In fact, of several variables explaining peace between states, trade, joint democracy, and joint membership in international organizations have strong statistically significant effects on peace that are substantively large, supporting theories of peace going back to Montesquieu, Immanuel Kant, and the Manchester School. Interdependence promotes peace.⁵⁰ Gaining interdependence is a policy problem, allowing human agency for building a more peaceful world, which is a far more optimistic view that allows global public action than the pessimism of neo-Malthusian arguments.

This chapter contends that conflict and development are consequences largely of policy. Thus, better policy environments locally and globally promise to make a difference. Better governance does not easily come about, however. It has to be effected through incentives. The end of the Cold War and all the attendant political, ideological, and strategic considerations no longer bear on the political and economic fortunes of poor countries. In this era of globalization, the opportunity for building a better environment for development and peace exists. Most countries around the world seek to be more globalized, although as some suggest, Sub-Saharan African countries may still suffer from internal biases against open markets and domestic rent-seeking coalitions that prevent better policies that would move many of these countries away from resource dependence and insecurity.⁵¹ Several parts of the world that enjoy nature's gifts, may in fact be cursed, but yet again, the resource curse may be overcome with conscious effort, which might be well under way in previously problematic areas, such as Sub-Saharan Africa and Latin America, due in large part to the emergence of political conditions that point towards better governance.

The Post-Cold War Security Scene

Nothing casts more doubt on the large arguments about the connection between global environmental change and security made by neo-Malthusians as does the picture of recent trends in security outcomes, such as the global level of organized armed conflict. The trend in the number of deaths in armed conflict is also greatly reduced relative to historical standards.⁵² Malthusian argument about rising temperatures and declining availability of natural resources is applicable at the global level, an overlay of average global temperatures on the civil war figure will show just the opposite – rising temperatures reduce civil war!⁵³ If there is a simple correlation between environmental change and civil conflict, then one might have to conclude that the environment must be getting better.

Contrary to popular beliefs, both international conflict and civil war are on the wane, as many others using different data and criteria for gauging the intensity of violence report.⁵⁴ Due perhaps to several high-profile conflicts involving the US after the September 11, 2001 attacks in New York and Washington, easy access to 24-hour global media coverage, and the relative proximity of recent conflicts to Western Europe, perhaps drive a sense of heightened insecurity. This is, as many claim, a rather “false sense of insecurity” and one that detracts from more “real” problems, such as poverty-related debilities that affects the largest portion of the world's population.⁵⁵

⁴⁹ De Soysa 2002; Weede 2004; Barbieri and Reuveny 2005; Busmann et al. 2005; and Krause and Suzuki 2005.

⁵⁰ Russett and Oneal 2000.

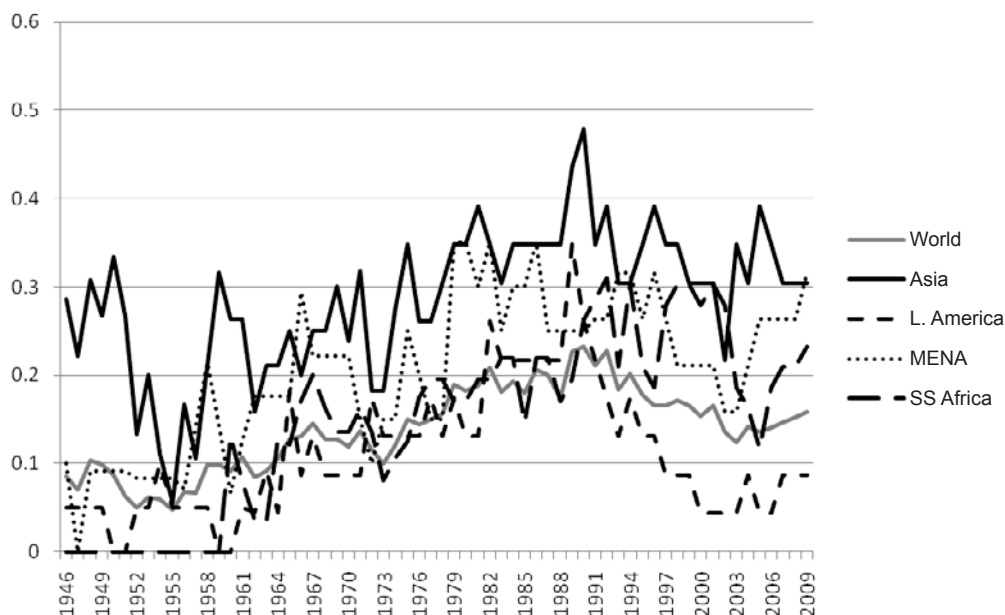
⁵¹ Moss et al. 2004.

⁵² Mueller 2004b; Gleditsch 2008; and Buhaug 2010.

⁵³ Buhaug 2010.

⁵⁴ Human Security Report 2005.

⁵⁵ Gambetta 2004; Mueller 2004a; and de Soysa 2007.



Note: Civil wars are conflicts between a state and an organized armed rebel group that have reached 25 deaths or more in a single year according to the Uppsala Armed Conflicts Project (UCDP 2011).

Source: Figure generated by author.

Figure 10.4 Regional risk of civil war, 1946–2009

The correlation between environmental change, or rising temperatures, and conflict at the global level is only a partial and thoroughly unqualified picture. The implications of climate change should be most severe where poverty, the dependence on rain-fed agriculture, and the dependence on renewable environmental assets are highest among ordinary people for their livelihoods, *ceteris paribus*. It could very well be that only the poorest are vulnerable. Apparently, very local-level human insecurity leads to national-level crises. Sub-Saharan Africa and many parts of Latin America are poor and seen to be vulnerable to global climate change. Even here, however, reality challenges neo-Malthusian expectations. Figure 10.4 disaggregates the global risk of civil war into regions.

The figure shows that the risk of civil war globally (“World”) increased steadily during the Cold War years, peaking in the early 1990s and then saw a steady decline until roughly 2003, when it has risen again. Sub-Saharan Africa (“SS Africa”) saw a massive decline since the mid-1990s and is driving up the global increase in recent years. Surprisingly, Latin America (“L. America”), which has had one of the highest risks as a region in the past, has seen a steady decline since the end of the Cold War and is now the region that bottoms the list. In effect, much of the global risk is being driven up in recent years due to increases in the Middle East and North Africa region (“MENA”) and Sub-Saharan Africa, most likely due to “the war against terror.” Asia, which is an extremely heterogeneous category has the highest incidence, where South and Central Asia as regions dominate the risk, again due to recent global security factors.

That is, most of the existing conflicts in recent years are taking place in Central and South Asia in a long band that stretches from the Caucasus down to South Asia. These conflicts are most likely end of empire conflicts following the breakup of the Soviet Union where irredentist and secessionist claims and criminalized violence exists in quasi-ethnic states, from Georgia to Sri Lanka and East Timor in what some have termed the “remnants of war.”⁵⁶ Contrary to popular opinion, however, Latin America and Sub-Saharan Africa generally show decreases in conflict incidence in the last decade, perhaps largely due to an activist and interventionist international community.

Reasons for Hope

The explanation offered here as to why recent years show a positive trend in African performance is greater liberalization of markets and politics, due in large part to the favorable international security and ideological climate after the end of the Cold War. Under these conditions, the curse of resources is likely to be far weaker and under pressure, due to better institutional management of wealth because of greater transparency and the weakening of autocratic rule. Moreover, the end of ideology has led to better economic policies being emulated across the world.⁵⁷ As some have suggested, much of the failure of development, particularly in Africa, can be blamed on inefficient and corrupt “bureaucrats” and the lack of markets.⁵⁸ The following discussion and examination of empirical facts with a focus on Sub-Saharan Africa will show clearly that things are improving there in this age of so-called “scarcity and climate vulnerability”.

While natural resources have been a curse in all the ways discussed above, it has also allowed African states to overlook markets as ways of extracting taxes and investing in people, since natural wealth provided convenient “resource streams” for rulers. A convenient resource stream renders social bases of taxation superfluous, which leads to semi-privatized states that will be disinterested in providing the optimal level of public goods and investing in people and institutions that safeguard markets, as has been the case in East and South East Asia. Resource wealth also allows states to close their economies and practice industrial substitution policies, which some have referred to as “precocious Keynesianism” for state building along nationalist lines.⁵⁹ The Cold War international climate and ideology allowed states to practice these policies with disastrous effect. In an age of globalization, the technology and capital required for diversification of economies away from dependence on monoculture development are available to a greater extent than ever before, which is promising. Thus, systemic factors are better today than they were during the Cold War. As Figure 10.5 demonstrates, Sub-Saharan Africa has historically lagged behind others in terms of free market conditions that encourage entrepreneurial investment and the growth of private markets, although the trend is in the right direction in recent decades. As de Soysa and Binningsbø⁶⁰ report, countries that have high natural assets and have a higher level of economic freedom tend to have lower levels of political dissent and repression of human rights.

The same might be said for political liberalization. During the Cold War, African leaders who looked East implemented communist, one-party dictatorships in the name of socialist

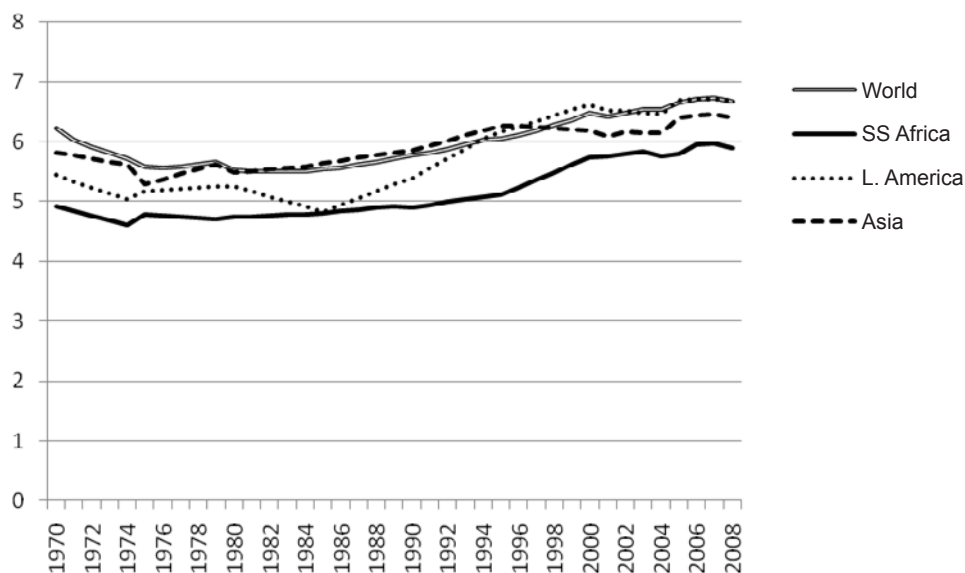
⁵⁶ Mueller 2004b.

⁵⁷ Simmons et al. 2004.

⁵⁸ Easterly 2005.

⁵⁹ Bellin 2004; and Waldner 1999.

⁶⁰ De Soysa and Binningsbø 2009



Note: The Economic Freedom Index is calculated from 22 variables measuring the friendliness of government policies toward private economic activity. Data available at <http://www.freetheworld.com/>.

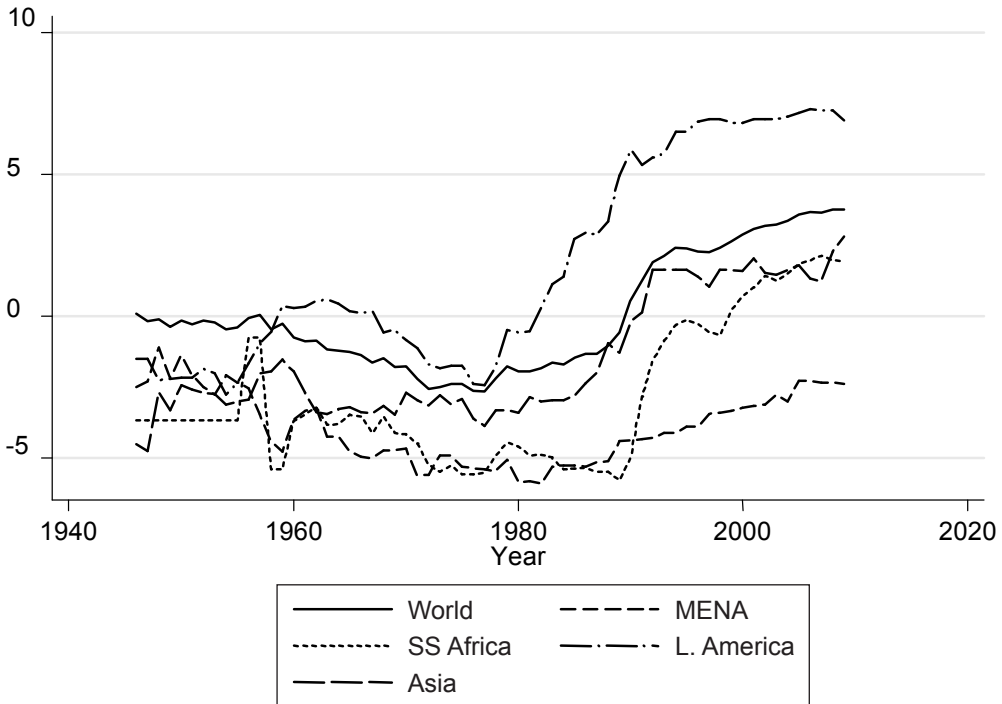
Source: The Fraser Institute. Figure generated by author.

Figure 10.5 Regional comparison of trend in economic freedom from the Economic Freedom Index, 1970–2008

development. Those who looked West, also tended to be dictatorial, and nascent democracy after independence was soon snuffed out. As Figure 10.6 demonstrates, however, this trend has reversed drastically with the end of the Cold War. The African deficit in democracy has closed rapidly despite some ways to go to catch up with the rest. The same trend is evident in the trend on human rights, which is the liberal component in liberal democracy (see Figure 10.7). As with democracy, Sub-Saharan Africa is catching up in recent years.

Finally, a measure of overall governance developed by the International Country Risk Guide (ICRG) also shows an optimistic picture for the Sub-Saharan African region in recent years, which supplements what we have seen for political and economic liberalization. As Figure 10.8 illustrates, Africa's performance is increasing over time, but a massive gap still remains relative to the rest of the World and East Asia and the Pacific in particular.

The dimensions just examined in terms of global trends relative to Sub-Saharan Africa, namely the growth of democracy, the improvements in government respect for human rights, overall economic and political governance, and sound economic policies for generating entrepreneurship and development are all pointing in the right direction, particularly after the end of the Cold War. While Sub-Saharan Africa still lags behind other regions, the direction of change is encouraging and points against arguments that suggest that climatic and environmental conditions can hold back vulnerable regions, such as Sub-Saharan Africa and Latin America. Of course, much of the phenomena of vulnerability and human security argued in the literature can be highly local and difficult to pinpoint in aggregated, national-level outcomes. However,



Source: Polity IV data, available at: <http://www.systemicpeace.org/polity/polity4.htm>. Figure generated by author.

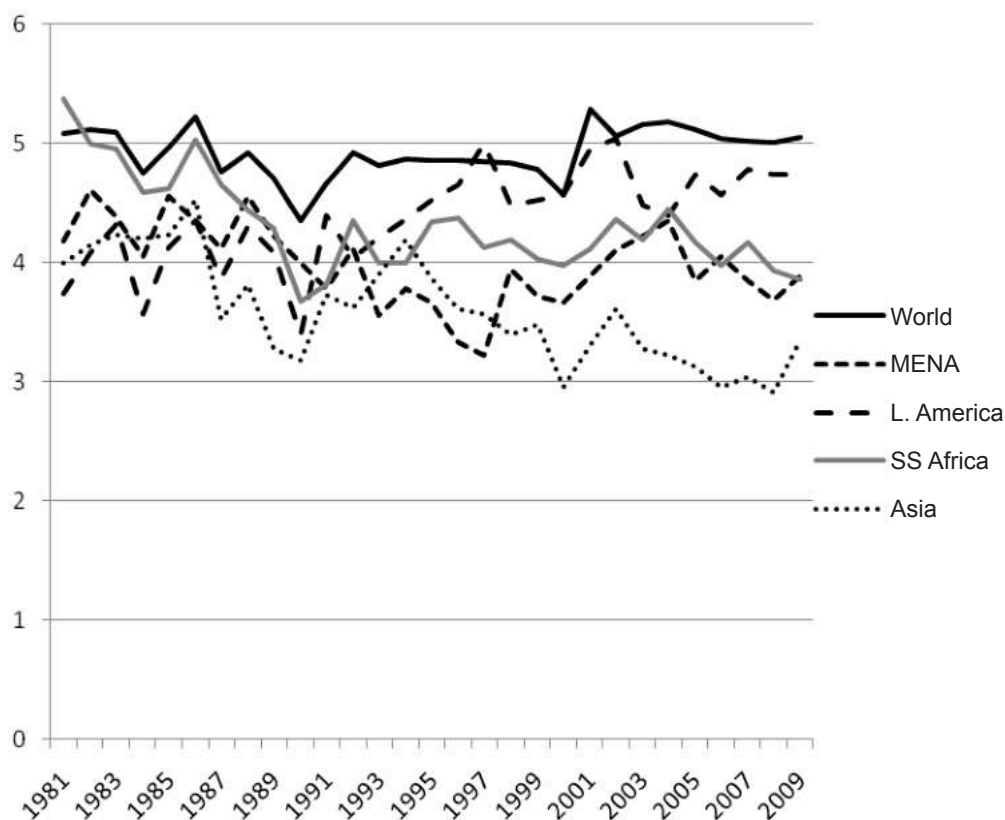
Figure 10.6 Regional comparison of trend in institutional (electoral) democracy, 1946–2009

responses to these highly localized vulnerabilities are the preserve of national states and governments, which is another analytical issue altogether. If scarcities are highly localized, then responsive national governments should be better able to implement the institutions and policies for greater public action to avoid harmful outcomes. This study has demonstrated that both theoretically and empirically, the more responsive governments and states are likelier to develop under conditions of relative scarcity and not founded purely on the largess of natural wealth, which tends to corrupt the course of good governance.

Conclusions

Underdevelopment and human insecurity are inextricably linked for a number of reasons – the lack of physical, human, and institutional capital hinder resilience to political and economic shocks, not to mention environmental and other natural disasters. Although most of the world's people are increasingly facing better prospects for security – both social and physical – the opportunities afforded by the end of the Cold War and the current age of globalization are not being realized equally by all despite steady improvements.⁶¹ The incidence of organized armed violence is declining rapidly since the end of the Cold War,

⁶¹ Kenny 2005.



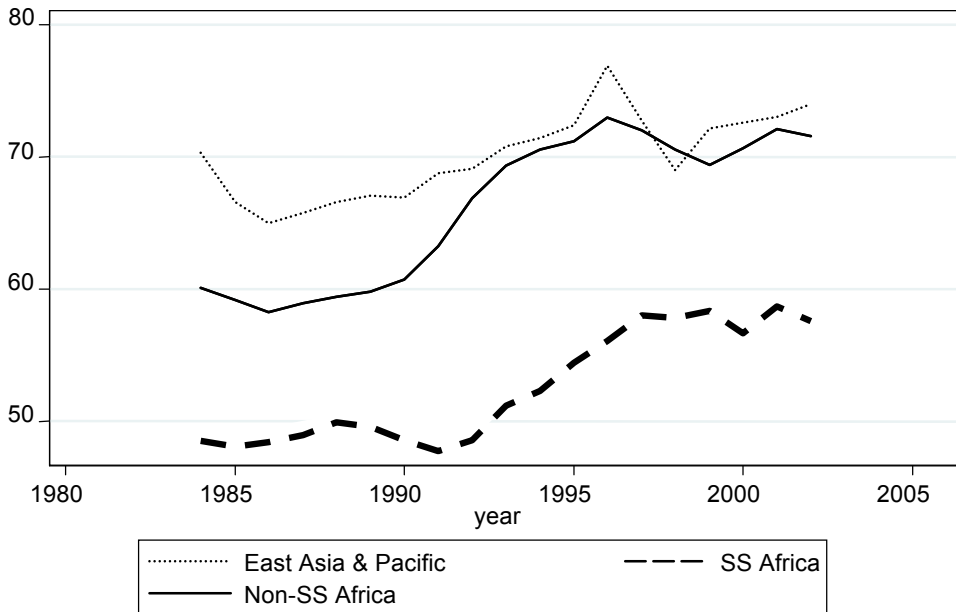
Note: The CIRI data measure the level of state violations of the physical integrity of people measured as political killing, imprisonment, torture, disappearances, etc. The data are available at <http://ciri.binghamton.edu/>.

Source: CIRI data (Cingranelli and Richards 1999). Figure generated by author.

Figure 10.7 Regional comparison of trend in state respect for human rights, 1981–2009

and the risk of organized civil war today is somewhere lower than what transpired during the period of the Cold War. Globalization promises security and development. Contrary to neo-Malthusian arguments that see a bleak future for security and development based on natural limits to growth and consumption, policy is what matters. The massive poverty reduction in India and China alone due in part to endogenous policy changes is staggering. Natural resource abundance, not its scarcity, hampers both good policy-making and civil peace required for ensuring long-term development and human security. The long-term improvement of the security situations in Latin America and to some degree in Sub-Saharan Africa flies in the face of the arguments about climate change and the future of development in rain-fed agricultural societies. Either the climate is improving, or conflict has little to do with the weather!

One of the primary reasons that increase the risk of conflict seems to be bad governance under conditions of natural resource abundance. The crucial task for global policy would be to



Note: The overall governance measure provided by the ICRG takes into account corruption and other risks for international business. The ICRG data are collected for commercial use and are available for purchase at <http://www.prsgroup.com/>.

Source: World Bank 2005. Figure generated by author.

Figure 10.8 Regional comparison of trend in governance, 1984–2004

direct aid, trade, and investment policies towards diversifying African economies away from extractive activity. The problem, as some pessimists on globalization claim, is not that Africa is captured by global markets hungry for resources, but that policies in these countries prevent resource rents from being translated into sustainable development. In fact, resources are being wasted rather than being deployed for productive investment. Angola, Nigeria, and the DRC could be some of the richest places on the planet if wealth is properly managed. Overcoming the “resource curse” might be a worthy challenge for global policy to address. Unfortunately, while governments pay lip service to the issue, very little is done. The private sector initiatives, such as corporate social responsibility, are a start, but the incentives to shirk (cheat) are so great that only time can judge its success. Besides these initiatives, institutions of global governance, such as the international financial institutions, could step in to devise programs that help states manage their wealth better, such as the management of rents from the Chad oil pipeline. These initiatives affected largely through global civil society action may already be having some impact on governance and peace in Sub-Saharan Africa.

Poor countries, such as many in Sub-Saharan Africa, lack physical and human capital necessary to join the globalized economies of the world. Many fall behind the rest of the world. Trade and investment could lift these countries out of this trap. However, domestic factors, such as rent-seeking and attitudes of governments and elites against open markets and foreign

capital, may still be hindering the rate of convergence with others.⁶² The international policy community, and perhaps also the academic communities, could work to increase transparency and awareness around how globalization can benefit these countries. The empowerment of civil society with increased levels of democracy goes some distance towards creating greater transparency and preventing rent seeking, leading to greater openness of these countries to trade.⁶³

The onus is not purely on the poor world. Rich countries should also do their part. Paradoxically, when the former colonies are becoming more open to global markets, the rich are cutting them off with tariff and non-tariff barriers.⁶⁴ Apparently, jobs are being lost to the South, but consider that the rich world spends over \$600 billion per annum on defence, \$300 billion on agricultural subsidies, and only \$60 billion on aid. One is forced to ask how this allocation improves the security for the rich. Clearly, local and global rent seeking hinders proper management of wealth, increases inefficient allocation, and perhaps hinders the prospects for development and peace. It is quite right that the “international community” focuses more and more on human security. It might be that future acts of global governance adjust the rich countries’ policies that violate the “human security” of the poor, the most odious kind of exploitation. Concerted global governance that addresses these imbalances is now more imperative than ever.⁶⁵ The question, however, comes down to political will, but despite goodwill, politicians will not act given imprecise advice. Perhaps consensus should be sought first among epistemic communities who can then bring sharply focused knowledge to bear that raises the costs of self-serving politics. As Katz⁶⁶ has shown in the case of the hyperbole about the risk of water wars, there are powerful interests that perpetuate myths for rather self-serving interests. My hope is that this chapter is a small part of the larger debate that this book generates in the wider arena in academia that dares to address policy relevance and forge discussion around the evidence and logic of “comfortable lies.”

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⁶² Moss et al. 2004.

⁶³ Milner and Kubota 2005.

⁶⁴ Bhagwati 1997.

⁶⁵ Institutes such as the Center for Global Development measure the commitment of the rich countries to helping the poor. See www.cgdev.org for their index.

⁶⁶ Katz 2011.

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PART III

GLOBAL GOVERNANCE

11 Legitimacy problems and responses in global environmental governance

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There is some irony in the predicament faced by many institutions set-up to “govern” global environmental problems. In contrast to their economic counterparts – the International Monetary Fund (IMF), the World Bank, the World Trade Organization (WTO) or even private economic standard setters – few question their purposes or see the pursuit of environmental goals primarily as an attempt to impose an unjust or exploitative world order. In other words, they do not generally face the “legitimacy crises” some believe beset economic institutions because they (allegedly) exert power and control without the requisite bases of social support of their rightness and appropriateness.² Yet, many scholars have focused their attention on major legitimacy challenges in global environmental governance for the opposite reason: too little power, not too much.

Put more generally, international legitimacy crises stem from a perception that institutions possess too much power or authority in their realm of activity without the requisite links to or foundation in relevant social constituencies. In contrast, environmental governance is said to *lack* the authority necessary to address global environmental problems.³ While environmental institutions are not immune to charges of “eco-colonialism” or “neoliberal hegemony,” compared to their economic and security counterparts, they generally fare well in terms of openness and transparency, accountability, responsiveness and access to decision-making, not only by states but even by civil society broadly conceived. That is not to suggest criticisms of environmental institutions on these counts are invalid, but that from the perspective of wider legitimacy problems in global governance, the usual focus on democratic legitimacy and reform might seem puzzling.

How can we understand this preoccupation? Does the literature on legitimacy in global environmental governance respond to the real concerns underlying it (that is, a lack of authority)? How might scholarship better respond to these underlying concerns? These are the questions that animate this chapter.

I shall argue that a separate agenda of democratizing global governance is driving much of the scholarship on legitimacy in environmental governance, but that this preoccupation has so far been limited in its ability to draw the links between democracy and increased authority. I

¹ This chapter builds upon, and reproduces in modified form portions of, Bernstein 2005; and Bernstein 2011, “Legitimacy in Intergovernmental and Non-state Global Governance,” *Review of International Political Economy* 18 (1): 17–51, reprinted by permission of the publisher (Taylor & Francis Group, <http://www.informaworld.com>). I thank Hamish van der Ven for research assistance. The Social Science Research Council of Canada provided funding for this project.

² International legitimacy crises, according to a recent special journal issue on the topic, occur when “the level of social recognition that its identity, interests, practices, norms, or procedures are rightful declines to the point where it must either adapt or face disempowerment.” Reus-Smit 2007, 157.

³ Dozens of works focus on the inadequacies of efforts to address global environmental problems, failures of global environmental governance, its lack of authority or “political clout,” and the need for reform. See, for example: Biermann and Bauer 2005; and Young 2008.

propose an alternative critical sociological approach. It asks not what *should* count as justification for recognizing the authority of an institution of global governance, but how particular requirements came to be viewed as justifications. This approach, I shall argue, better draws a link between what authority requires and what social constituencies who grant legitimacy demand. The chapter will show that no universal formula exists to increase legitimacy across the full range of environmental institutions, and explore a number of implications of this approach for strengthening the authority and transformative capacity of global environmental governance.

Political Legitimacy and the Quest for Greater Authority

Because the primary driver of legitimacy concerns in global environmental governance is increased authority, this chapter focuses specifically on “political legitimacy,” defined as the acceptance and justification of shared rule by a community.⁴ This definition self-consciously straddles the traditional divide between empirical measures of legitimacy and normative theory: it recognizes that, as a practical matter, arguments about why members of a community *should* accept a decision or rule as authoritative includes possible reasons why the decision *is* accepted, and vice versa. The relationship between justifications and acceptability should therefore be a matter of investigation.

A focus on *political* legitimacy also places attention squarely on authority relationships where an actor or institution makes a *claim* to have a right to govern.⁵ It concerns situations in which a community is subject to decisions by an authority that claims to have a right to be obeyed, and actors intersubjectively hold the belief that the claim is justified and appropriate.⁶

Legitimacy is also the glue that links authority and power. By justifying authority in the eyes of the governed, legitimacy empowers authorities and increases the likelihood their commands will be obeyed.⁷ Legitimacy “matters” in global governance because coercion and inducements – the two alternative tools of order maintenance or social control – are often unavailable, in short supply, or costly to use.⁸ Legitimacy can also reinforce or reflect underlying power relationships. This linkage is particularly important for the question addressed later in the chapter of why particular understandings of what is legitimate prevail as well as how legitimacy justifies particular forms of political authority. Thus, legitimacy does not necessarily adhere to abstract notions of right, even if it must provide justifications for rule acceptable to a community.

The most relevant types of power for the question of what legitimacy requires are “institutional” (wherein rules and laws empower particular actors) and “productive” (which works through diffuse constitutive relations to pass background knowledge of the “command structure”⁹ into sites of authority, empowering them).¹⁰ They are well suited to understanding the influence and constitutional properties of rules and discourse, which are directly relevant for how particular justification make their way into institutions of global governance.

In terms of community, legitimacy always rests on shared acceptance of rules and rule by affected groups, who constitute the community that grants legitimacy, and on the justificatory

⁴ For a justification of this definition and more detailed discussion of political legitimacy, see Bernstein 2005, 2011.

⁵ Uphoff 1989.

⁶ Habermas 1979, 178, 182; and Bodansky 1999, 602.

⁷ Weber 1978, 953.

⁸ Hurd 2007.

⁹ Douglas 1999, 138.

¹⁰ These conceptions come from Barnett and Duvall’s (2005) fourfold typology of power in global governance.

norms they recognize. The coherence or incoherence of that community matters, since incoherence or strong normative contestation among groups within a legitimating community make establishing clear requirements for legitimacy difficult.

The Preoccupation with Democratic Legitimacy and its Limits

The preoccupation with democratic legitimacy emerged from debates on global governance at the end of the Cold War. Rising hopes around global liberalism, cooperation and globalization as forces that could spread human rights, development and prosperity brought with them concerns about the increasing power and reach of international institutions and new forms of governance beyond the state ostensibly to promote such values. These concerns were expressed in terms of justice and democracy by utilizing the rationale that institutions of global governance usurp domestic democratic institutions.

A second motivating factor specific to environmental governance arose as arguments started to surface that while other institutions of global governance appeared to gain in authority, with few exceptions, institutions to address global environmental problems appeared weak, subordinate, or ineffective. This suggested that greater legitimacy was needed to establish more extensive, enforceable, and effective environmental action at the global level. At the same time, many scholars and activists argued that ostensibly non-environmental institutions such as the WTO or the World Bank, which nonetheless play a significant role in international environmental governance, paid insufficient attention to environmental concerns or subordinated them to the goals of open markets, corporate freedom, efficiency and economic growth. Environmental protection and sustainable development thus joined human rights, labor rights, and poverty reduction, as unmet goals driving the broader legitimacy challenge to international liberalism and the global governance institutions established to promote and maintain it.¹¹

For both these problems, democracy emerged as the answer to the legitimacy problem because it is the central principle in contemporary politics that justifies authority.¹² Hence, if globalization reflects increased economic integration or the extension of political authority, democracy ought to follow.¹³ Recognizing practical limits to extending the models of democratic legitimacy beyond the state, scholarship has singled out the importance of increased accountability to states and, sometimes, other affected publics. But it also frequently invokes related values including responsiveness, transparency, participation, deliberation, and engagement with global “civil society.” The resultant scholarly debate on the proper combination and content of procedural and substantive legitimacy, deliberation, rights and duties, or accommodation of difference that would justify political authority is sophisticated, rich and complex.

Elsewhere I have summarized these debates as they relate to environmental governance,¹⁴ as has Karin Bäckstrand (ch. 39 in this volume). While it would be naive to dismiss the legitimating power of democracy outright, its assumed relationship to legitimacy in global governance deserves critical examination on at least three grounds.

First, democracy beyond the state scholars often imply that satisfying the normative criteria they identify will satisfy actual legitimacy demands in international institutions. The normative

¹¹ Bernstein and Pauly 2007.

¹² Representative examples include Held 1995; Bodansky 1999; Greven and Pauly 2000; Young 2001; Payne and Samhat 2004; Bäckstrand 2006a; and Buchanan and Keohane 2006.

¹³ Habermas 1990, 491.

¹⁴ Bernstein 2005, 145–52.

theories their work builds upon, however, are better suited for the development of ideal theory or to provide “the basis for principled criticism of global governance institutions and guide reform efforts,” as the best work in the genre acknowledges.¹⁵ Their mode of reasoning closely parallels efforts by political philosophers to develop normative theories of legitimacy and the state. Unsurprisingly, they arrive at nearly identical core principles as those theories, albeit tempered by limits imposed by long chains of accountability or weak political community. Hence, Buchanan and Keohane’s “global public standard” of legitimacy includes calls for deliberation, participation, and accountability in the sense of public justification of institutional policies.¹⁶ While they separate legitimacy from justice,¹⁷ they insist that institutions should have “minimal moral acceptability” or not be blatantly unjust. Institutions should also provide benefits relative to what would be provided in their absence. Others’ criteria overlap significantly.

Regardless of the merits of particular formulations, normative theory development is a very different exercise from critically assessing actual legitimacy demands and what determines them. Moreover, as Koppell points out, these exercises reveal that “there are no universally shared criteria” of legitimacy in global governance.¹⁸

Second, the democratic legitimacy literature is largely unhistoricized. As Christopher Hobson observes, “The now widespread agreement over the normative desirability and political legitimacy of democracy is noticeably different from the historically dominant understanding that regarded it as a dangerous and unstable form of rule which inevitably led to anarchy or despotism.”¹⁹ Whereas a number of studies acknowledge that legitimacy requirements change over time, they develop their standards based on contemporary understandings of democratic or deliberative theory, and consider change primarily in the context of changing goals and functions of institutions. Yet, this ignores changing understandings of democracy or bases of legitimacy in history. Not long ago, shared rule in the international context was understood exclusively as rule by sovereign states, and shared only in the sense of establishing a consensus among the great powers.²⁰

Third, empirically, we know that justifications for authority in international institutions can rest on different sources. Esty, for example, has identified “expertise and the promise of social welfare gains; order and stability; checks and balances; and political dialogue and a ‘right process’ for decision-making.”²¹ One also observes different mixes of what Scharpf has labeled “input” (process) and “output” (performance and efficiency) legitimacy appearing to justify authority in different cases.²² Some institutions are allowed to operate largely shielded from public view, some operate in the marketplace almost exclusively among private actors, and others seem to be evaluated based solely on the idea that they serve functions that constituents value (what Barnett and Coleman call “functional legitimacy”).²³

Add to these analytic concerns perhaps the biggest puzzle raised by the focus on democratic legitimacy: why scholarship on global environmental governance should be preoccupied with

¹⁵ Buchanan and Keohane 2006, 405.

¹⁶ Buchanan and Keohane 2006.

¹⁷ Others (Franck 1995; Devetak and Higgott 1999; and Singer 2004) argue that conditions under globalization have sufficiently changed that justice and legitimacy may be linked globally as they are within the state.

¹⁸ Koppell 2008, 192.

¹⁹ Hobson 2009, 632.

²⁰ Kissinger 1964; and Claude 1966.

²¹ Esty 2006, 2007, 511.

²² Scharpf 1997.

²³ Barnett and Coleman 2005, 597–8.

it at all? By most measures, although varied across institutions and agreements, environmental governance fares relatively well. While a full summary of evidence is beyond the scope here,²⁴ a few areas of governance illustrate the point.

On active participation and increasing roles in governance by broader civil society, overwhelming evidence supports Peter Haas' argument that states, though still the primary locus of authority, "are increasingly accountable to domestic and transnational constituencies" if one considers the range of activities and influence of scientists and nongovernmental organizations (NGOs) in decision-making, advice, advocacy and monitoring at multiple levels of governance.²⁵ Moreover, delegations to multilateral negotiations frequently include members of civil society and the business community (the fact that civil society groups were in an uproar when limits had to be placed on access to official climate negotiations in 2009 in Copenhagen is as much evidence for the expectations of access that has been established in environmental governance as it is an indication that governments may be pulling back from more open access as the political stakes increase). NGOs also play formal and informal roles in monitoring and implementation, and a number of transnational standard setters have arisen to perform these roles. Sometimes they create their own governance systems in response to increased legitimacy demands from a wide range of constituencies concerned with inadequate international governance in issues ranging from forestry and coffee to governing carbon markets.²⁶ Transnational corporations have also significantly increased their participation and political organization in a variety of environmental governance forums.²⁷

More broadly, international environmental institutions have frequently been leaders in providing nonstate actors access to information and participation. Both the 1972 UN Conference on the Human Environment in Stockholm and the 1992 UN Conference on Environment and Development in Rio de Janeiro were breakthrough events for NGO participation in their times. The Stockholm conference originated the idea of a parallel NGO forum and the Rio Secretariat relaxed accreditation rules to allow non-ECOSOC (UN Economic and Social Council) NGOs to participate, both of which became the norm for subsequent world conferences.²⁸ The lead-up to the 2012 UN Conference on Sustainable Development (Rio+20) similarly includes a number of opportunities for civil society to make direct submissions into the preparatory process.

The 2002 World Summit on Sustainable Development (WSSD) in Johannesburg marked further innovations, multi-stakeholder deliberation and public-private partnership agreements. While it did not invent these concepts, it did much to promote the idea then emerging that environmental governance should not be limited to interstate agreements. Stakeholders ought to be engaged, not only by informing intergovernmental decisions, but also through public-private partnerships to implement sustainable development.²⁹ Although states never relinquished their sole authority to make decisions, these innovations can be read as an opportunity for "stakeholder democracy" that moves beyond mere participation to "collaboration" and truer "deliberation" among states, business, and civil society.³⁰ Multi-stakeholder dialogues had already been part of the Commission on Sustainable Development's regular sessions since

²⁴ See Bernstein 2005.

²⁵ Haas 1999, 103.

²⁶ See Bernstein and Cashore 2007; Newell and Paterson 2010, 118–25; and Abbott 2011.

²⁷ Usui 2004, 216.

²⁸ United Nations 1972; Haas et al. 1992, 6, 32; and Mori 2004, 157–9, 173, n.3.

²⁹ Bäckstrand and Saward 2004; and Pattberg et al. forthcoming. Public-private partnerships, however, are not without controversy owing to their perceived neoliberal character.

³⁰ Bäckstrand and Saward 2004, 5, 13.

1998, and in 2002 UNEP's Governing Council (GC) institutionalized a Global Civil Society Forum (endorsing an initiative started two years earlier) in conjunction with meetings of the GC and Global Ministerial Environment Forum (GMEF).³¹

Environmental governance seems even to make a difference for democratic reform in development finance institutions, where change has otherwise been more difficult and generally only follows significant structural changes in the global economy, such as the current set of reforms in the IMF that not only required spectacular economic growth among emerging economies but also the 2008 financial crisis. The most notable example is the Global Environment Facility (GEF). A comparative study that assessed democratization in global governance according to a model of deliberative democracy identified the GEF as "perhaps the most inclusive and open international organization."³² The study's authors note that Southern states' suspicions over environmental "conditionality" gave way to stronger support after a series of reforms in the 1990s, including a balance of donor and recipient countries in its governing council, increased transparency, and direct participation by NGOs through formal consultations. Where critics still maintain that actual practices have not lived up to the deliberative ideal, the GEF "has adopted and implemented democratic procedures virtually unmatched in global politics."³³

In addition to these organizational reforms, global environmental norms and treaties support ongoing improvements in public participation and transparency. For example, Rio Declaration Principle 10 asserts that "environmental issues are best handled with the participation of all concerned citizens, at the relevant level" and promotes access to information, participation in decision-making, and access to judicial and administrative proceedings at the national level.³⁴ While only soft law, many states have adopted its spirit. The 1998 Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, which came into force in 2001, more formally institutionalizes provisions for transparency and participation at the international as well as national levels.

In line with these norms, multilateral environmental negotiations are remarkably open and transparent. Although practices vary across environmental agreements, detailed information about most negotiations and side meetings are readily available to broader publics, most notably through a nongovernmental reporting service run by the International Institute for Sustainable Development, the *Earth Negotiations Bulletin*.

These examples suggest that environmental governance stacks up extremely well by most criteria of democratic legitimacy, especially in comparison with economic and security institutions, many of which have weighted voting and much less access for nonstate actors. Yet, a sense that legitimacy problems remain in environmental governance reveals limitations of a conception of legitimacy based solely on a democratic or deliberative justificatory discourse.

One problem concerns a possible legitimacy–effectiveness trade-off. Greater participation, whether of larger groups of states or NGOs, can slow down decision-making, make consensus more difficult, and generally increase the challenge of collective action. The assumption that participation leads to influence or meaningful deliberation can also be questioned. If innovations such as stakeholder dialogues provide little influence on government to government

³¹ The GMEF is a ministerial level meeting of GC members. See UNEP 2004.

³² Payne and Samhat 2004, 7.

³³ Payne and Samhat 2004, 98.

³⁴ United Nations 1992.

negotiations, do they really increase legitimacy? Many participants at the WSSD, for example, saw their limited impact as a “disappointment,” and as “more monologues than dialogues” because of limited participation by high-level officials.³⁵

From the perspective of the normative scholarship on democratic legitimacy, it has been very difficult for scholars to evaluate the effects or relevance of these trade-offs. To oversimplify only slightly, the democratic legitimacy literature tends to suggest that democratic legitimacy will produce more effective outcomes, or that ineffectiveness will eventually erode legitimacy,³⁶ while institutional studies tend to suggest stronger trade-offs.³⁷ Both tend to draw these conclusions from their theoretical assumptions about what legitimacy requires rather than demonstrating or explaining those requirements. Others that do investigate organizational responses to legitimacy challenges usefully demonstrate that different organizations view the relationship between values like accountability, transparency and legitimacy differently, but largely because they value legitimacy differently as a means versus an end. For example, Auld and Gulbrandsen found in a comparison of two environmental certification institutions that the Marine Stewardship Council (MSC) used transparency and stakeholder consultation to increase the credibility of its assessments (with the goal of increasing effectiveness) while the Forest Stewardship Council (FSC) treated these two values as ends in themselves.³⁸ At the same time, an empirical study of forest certification found that business’s perception of the legitimacy of the FSC in five countries³⁹ depended primarily on “pragmatic” considerations, specifically whether it could ameliorate potential economic losses from boycotts or other targeting activities, or whether they could benefit from improved reputation or niche market opportunities.⁴⁰ Meanwhile, a review of the effectiveness of accountability arrangements in transnational and international governance more generally found little evidence that any particular configuration of accountability mechanisms made a difference in effectiveness (defined broadly as whether an institution’s rules or norms were implemented domestically).⁴¹

Further research might do more to empirically investigate various claims about democratic legitimacy. Here, however, I argue for an important step that might help bridge the distance between normative theory and presumed legitimacy requirements and outcomes, and assess whether, or under what conditions, these trade-offs really exist. I propose an alternative approach for this task that addresses why particular understandings of legitimacy come to dominate as requirements for increased authority. Only with this knowledge can we understand how or why legitimacy might be more or less tightly coupled or in conflict with other values such as effectiveness or democracy. Without that step, it is difficult to know where reform efforts should be focused or why.

A Critical Sociological Approach

While sociological in its *explanatory* underpinnings, the critical approach I propose here does not aim to “measure” legitimacy.⁴² Thus, it is not strictly situated on one side of the traditional empirical–normative divide in legitimacy research. Rather, it can be considered critical rather

³⁵ Bäckstrand and Saward 2004, 17.

³⁶ For example, Eckersley 2007.

³⁷ For example, Victor 2006.

³⁸ Auld and Gulbrandsen 2010.

³⁹ Canada, the United States, the UK, Germany and Sweden.

⁴⁰ Auld et al. 2004, 221.

⁴¹ Koenig-Archibugi 2010, 1156.

⁴² Attempts in global governance scholarship include Moravcsik 2004; Bäckstrand 2006a; and Zweifel 2006.

than normative theory. Instead of beginning from normative arguments about what *should* count as justification for authority, it asks how and why particular requirements come to be viewed as justifications for political authority.

Based on this approach, I outline a comparative framework⁴³ designed to explain variance in legitimacy requirements across global governance institutions rooted in state-centric authority and nonstate authorities,⁴⁴ and across different issue areas (although here I focus on examples of environmental and social regulation).

The framework makes the central argument that what constitutes legitimacy results from an interaction of the community of actors affected by the regulatory institution, that is, the public who grant legitimacy, with broader institutionalized norms – or social structure – that prevail in the relevant issue area. These interactions create different legitimacy requirements across different issue areas and forms of governance. The framework also draws attention to the power dynamics implicated in those interactions.

The framework builds on insights from sociological institutionalism and its adaptation by constructivist international relations scholars. In that literature, legitimacy refers to a collective audience's shared belief, independent of particular observers, that "the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions."⁴⁵ This understanding usefully highlights that legitimacy is rooted in a society or community in which the rule or institution operates.⁴⁶ In a similar vein, interactional legal theorists have pointed to processes in which practices become institutionalized, or accepted as "appropriate" by the community in an ongoing process of legitimization and delegitimization. From this perspective, rules constantly interact with the social purposes and goals of relevant audiences or communities⁴⁷ and standards of legitimacy may vary as a result.

Extrapolating this perspective to the problem of global governance, what mode of legitimation becomes institutionalized depends on the historically contingent values, goals, and practices of the relevant society. Within that society, different audiences of states, civil society, or marketplace actors may share different criteria or weightings of "input" versus "output" legitimacy, or more traditional notions of substantive (values of justice and fairness) legitimacy.

In state-centric global governance, broader rules and norms of the international society of states generally coincide with norms of the legitimating community, since states create them through state–social structure interactions. Nonstate or hybrid networks may also generate their own normative environment, but those interactions are never completely dis-embedded from wider economic, social and political systems. For example, an attempt to build legitimate governance of sustainable forestry through a transnational network of producers (forest companies) and consumers (retailers of forest products) must not only generate legitimacy among those parties, but also navigate rules of international trade legitimated through interstate processes and regulatory and social environments of states in which companies operate. Nor are they dis-embedded from affected publics, who increasingly demand inclusion or some other mechanism of accountability.

⁴³ Developed more fully in Bernstein 2011.

⁴⁴ The categories of state-centric and nonstate governance are ideal types.

⁴⁵ Suchman 1995, 574.

⁴⁶ Franck 1990, 198.

⁴⁷ Brunnée and Toope 2010.

Social Structure

Social structure is composed of global norms and institutions. It defines what appropriate authority is, where it can be located, and on what basis it can be justified.⁴⁸ In the case of governance institutions in the environmental and social arena, three elements of social structure are most relevant.

First, as in virtually all issue areas, the deep structure of the system remains norms that have legitimated the sovereign authority of states.⁴⁹ Governance rooted in sovereign state authority remains the privileged form of legitimate global governance. Nonetheless, there is nothing immutable about states as the sole repository of authority.⁵⁰ The literature on fragmenting authority and private governance under globalization⁵¹ recognizes that political authority may occur in interaction with or relatively independently of sovereign states, and raises questions about what would then legitimate it. Thus, whereas intergovernmental institutional legitimacy may still rest primarily on state consent, delegated state authority is only one possible foundation for nonstate or hybrid institutional legitimacy, especially when relevant communities demand governance after states have failed to act.

Norms defining the international political economy (IPE) of an issue comprise a second relevant element of social structure. In the case of environmental governance, social structure reflects a general shift in global environmental norms since the 1970s that reflects broader changes in the IPE toward support for liberalized markets, deregulation, and working with markets and the private sector, including the use of market-based policy instruments, to achieve policy goals.⁵² While there has been some pushback on the limits of neoliberal policies and modes of governance from a variety of quarters, the basic norms of “liberal environmentalism,” which predicate environmental protection on support for a liberal economic order, continue to define appropriate global environmental and social governance. For example, Principle 12 of the 1992 Rio Declaration on Environment and Development – the most widely accepted consensus statement on sustainable development norms – asserts that “States should cooperate to promote a supportive and open international economic system that would lead to economic growth and sustainable development in all countries, to better address the problems of environmental degradation.”⁵³ The WTO preamble⁵⁴ contains nearly identical wording, as do policy statements across the Bretton Woods and UN systems. The 2002 WSSD further reinforced this understanding of appropriate governance when it promoted public–private partnerships to implement sustainable development. Similar moves toward public–private partnerships are evident throughout the UN system.⁵⁵

Third, since the end of the Cold War, a growing normative consensus has emerged on the need to “democratize” global governance. These norms include demands for democratic reform and improved public accountability of international institutions to states and/or broader affected publics,⁵⁶ as well as “stakeholder democracy” that calls for “collaboration” and truer “deliberation” among states, business, and civil society.⁵⁷

⁴⁸ Finnemore 1996; Boli et al. 1997; Ruggie 1998, 22–25; Reus-Smit 1999; and Barnett and Coleman 2005.

⁴⁹ Ruggie 1998, 20.

⁵⁰ Reus-Smit 1999; and Hurd 2007.

⁵¹ For example, Cutler et al. 1999; Hall and Biersteker 2002; and Grande and Pauly 2005.

⁵² Bernstein 2001.

⁵³ United Nations 1992.

⁵⁴ WTO 1994.

⁵⁵ Noël and Thérien 2008, 166–97.

⁵⁶ For example, Payne and Samhat 2004; and Held and Koenig-Archibugi 2005.

⁵⁷ Vallejo and Hauselman 2004; and Bäckstrand 2006b.

These elements operate in part through social structure's discursive and disciplining role. For example, while there may be no formal hierarchy of international laws, there are institutions that play a dominant role in legitimating and de-legitimizing practices. For example, in the case of ISEAL Alliance⁵⁸ – an umbrella organization for nonstate social and environmental certification and standard setting organizations created to develop agreement on “best practices” for its members – it pays explicit attention to requirements set out by the International Organization for Standardization (ISO) and WTO agreements, especially on Technical Barriers to Trade. The reason is the latter organizations through their institutional power define requirements to be recognized as a legitimate standard-setting body.

Social structure, however, is not wholly determinative of what constitutes legitimacy. Organizations may also respond to demands from their constitutive communities – which may or may not reflect institutionalized norms in broader social structure. To capture this interaction, the framework turns attention to relevant political communities that grant or withhold legitimacy.

Community

New modes and sites of governance throw traditional notions of the international community into question because they increasingly target or affect nonstate actors or communities, whether firms whose production is affected by emission limits or campaigns for corporate responsibility; fishers whose catch is limited by fisheries regimes; accountants who must practice in accordance with transnational standards; or local communities affected by decisions of an international financial institution. Hence, there is a mixing of international and “global” communities from which justification and acceptance of rule stems.⁵⁹ An appropriate research strategy, then, is to identify political communities wherever they form, whether in professional or technical networks, relevant marketplaces, transnational or local civil society, or the traditionally demarcated “international society” of diplomats and state officials, and ask on what bases legitimacy within those communities rests.

Establishing the boundaries of the relevant communities is an empirical and interpretive endeavor, and unlikely to be without controversy. It poses a particularly significant challenge for nonstate governance, which may target nonstate as well as state actors for regulation, and which often depends on a diverse group of actors to support or promote it.⁶⁰

As a first cut, the relevant community consists of rule makers and those over whom authority is claimed, or targets of rules. However, even when an institution seeks legitimacy from a defined community (say, states for an international treaty such as the UN Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol or participating firms and the sponsoring NGOs in the case of a transnational certification system such as the MSC or FSC), its rules may have implications for a wider community (say, environmental NGOs in the case of the Kyoto Protocol or non-participating sectoral actors in the case of standard-setting organizations, or states in the case of certification systems). This complexity forces attention to how different audiences of states, global civil society, or marketplace actors may share or differ in criteria or weightings of the elements of legitimacy that justify political domination. For example, many global civil society organizations highly value accountability, participation,

⁵⁸ For a detailed analysis of this case using the framework, see Bernstein 2011.

⁵⁹ Clark 2007.

⁶⁰ Black 2008, 147.

transparency and equity, while business actors may value efficiency, the rule of law, and fairness in the marketplace. Moreover, discourses of rights, global environmental stewardship, or traditional knowledge may play different legitimating roles in different local contexts. There is no abstract mix of procedural, substantive, or performance criteria of legitimacy that can be known to produce legitimacy outside the context of particular political communities.

The challenge of identifying community norms may also vary across issue areas. For example, the private regulation of business practices usually involves relatively small well-defined communities of firms and/or professionals, and sometimes a small, defined group of government officials, wherein pragmatic and performance legitimacy criteria tend to dominate.⁶¹ Procedural legitimacy concerns might focus on the functioning of mechanisms to address conflicting standards or technical requirements. Fairness might be defined as not unduly providing competitive advantage. However, what legitimacy requires may become further complicated when there is a potential for conflicts with wider societal values (for example, health, environment, food safety, and so on). This may occur even in ostensibly hard-core economic areas such as financial regulation, to the degree that actors currently outside or on the margins of governance (for example, private actors from developing countries, NGOs, and so on) perceive the regulatory regime to affect their interests, broader public policies, or economic opportunities.⁶² For nonstate forms of governance that stem from stakeholder networks – such as the ISEAL Alliance – the community is almost always more complex, with a greater potential for contestation over legitimacy requirements.

Implications for Improving Legitimacy

The big implication of a critical sociological approach is that no universal formula exists to increase legitimacy across the full range of environmental institutions, especially owing to the increased complexity of governance arrangements across multiple scales.⁶³ Legitimacy requirements evolve over time, in the interaction of affected communities and social structures. For example, state consent is no longer sufficient for legitimacy even in multilateral settings, with the advent of a growing normative consensus on the need for greater democracy in global governance and the shifting “realm of political action” of institutions under globalization, which can require shifts in how they view their “social constituency of legitimation.”⁶⁴ Strengthening legitimacy thus means finding ways to shore up multiple sites of authority, build coherence, exploit synergies and find leverage points to catalyze necessary resources and learning to transform social and economic activity. The challenge is to respond to multiple constituencies while building support in the absence of centralized authority.

Attention should also be paid to differences in legitimacy requirements among intergovernmental versus nonstate institutions – though more nuanced analysis of legitimacy requirements in specific problem areas is also needed to avoid overgeneralizations.

Traditional intergovernmental processes face a dual pressure. On the one hand, multilateral treaty-making, especially for complex problems such as climate change and forests, is increasingly under attack as inadequate, inappropriate, inefficient, or simply unable to respond to global environmental challenges. On the other hand, multilateral institutions face increasing democratic pressures for transparency, access to decision-making by all affected parties,

⁶¹ Porter 2007.

⁶² Underhill and Zhang 2008, 539–40.

⁶³ Biermann et al. 2009; and Buck et al. 2010.

⁶⁴ Seabrooke 2007.

improved accountability through establishing and monitoring measurable actions and outcomes, and, depending on the issue and circumstances, opportunities for stakeholder involvement, even as the basic parameters of its legitimacy requirements rooted in state consent remains relatively constant.

Meanwhile, as nonstate and public–private forms of governance proliferate in the absence (or owing to the weakness) of centralized regimes, democratic pressures increase, not decrease. For example, standard setting, whether through traditional bodies such as ISO or newer environmental and social certification systems, face demands from wider sets of stakeholders for responsiveness to affected communities in the North and the South, as well as resources to enable full participation.

Indeed, in the case of ISEAL,⁶⁵ relevant audiences hold its members to a very high standard of stakeholder access, transparency, deliberation, and North–South equity. The need to create more direct lines of accountability to stakeholders is perhaps unsurprising since nonstate standard setters are not authorized by already legitimate state authorities. Still, these requirements in the social and environmental area seem especially high.

At the same time, the ISEAL case reveals less demand for accountability to states and a greater emphasis on performance than international treaties such as the Kyoto Protocol, both in terms of opportunities for business and improved social and environmental practices.

Moreover, ISEAL's criteria for gaining legitimacy are further complicated by significant challenges of political community. Unlike self-regulatory business networks where managers, technical experts, and governments generally share common norms and goals such as efficiency and profitability, normative contestation, even on what legitimacy means, is likely to be higher among relevant audiences of ISEAL members. At the same time, self-regulation by industry in the social and environmental area, by the same logic, will be disadvantaged in gaining legitimacy compared to ISEAL members owing to its lesser ability to respond to the wider constituency of legitimation while being held to higher standards of democratic legitimacy and performance. Thus, simply increasing “democracy” does not capture the full scope of the legitimacy challenge, as there is wide variation in what institutions of global environmental governance require to be recognized as legitimate.

Following especially from the arguments around community, mechanisms and processes are needed to create learning and coherence across relevant stakeholders and communities who may have very different conceptions of legitimate governance or sustainable development. For example, countries at different levels of development or with different political cultures may view trade-offs differently between universal participation versus efficiency in decision-making among smaller groups of key actors, or have different understandings of the appropriate role of states and markets in development. Similarly, market actors (firms, business associations, investors) may stress pragmatic and performance legitimacy criteria,⁶⁶ whereas social and environmental groups may judge legitimacy more on substantive goals of environmental integrity or social objectives, and prioritize procedural legitimacy and accountability to wider communities. Because sustainable development institutions are embedded in a long tradition of openness to stakeholder engagement as well as the increasing emphasis on the importance of ownership by, and accountability to, those affected by such governance, meeting legitimacy demands will require ways to encourage bridging these potentially different understandings.

⁶⁵ Based on findings in Bernstein 2011.

⁶⁶ Auld et al. 2004; and Porter 2007, 119–31.

Mechanisms that encourage learning and knowledge diffusion across stakeholders, trust building, and socialization to common norms should therefore be a priority since they are likely to lead to increased mutual understandings and coherence, ownership of decisions, and credibility of institutions.⁶⁷

This lesson has important implications for the more general argument made by a number of scholars of global environmental politics that environmental goals should be mainstreamed into global economic institutions to overcome perceived conflicts that might undermine environmental gains because of poor policy coherence.⁶⁸ Admonishments for greater coherence will mean little without building mechanisms to bridge competing understandings of legitimate purposes and legitimacy requirements among different institutions and constituencies.

A critical sociological approach also highlights that power is implicated in any form of governance and what its legitimation requires. In the case of social and environmental regulation, the analysis of legitimacy and power highlights that although newer nonstate initiatives make serious efforts to address environmental and social concerns and respond to democratic pressures, a critical assessment is required of whether the shift towards public–private partnerships and market-based governance systems in practice privileges the market over alternative bases of governance, biases governance towards market mechanisms and voluntary initiatives over regulatory instruments, or gives corporate voices a disproportionate say in policy development and implementation at the expense of state representatives and public participation.⁶⁹

An analysis that considers institutional and productive power in particular can help understand an important irony in environmental and social global governance in this regard. On the one hand, social structure may legitimize forms of governance that may not coincide with what many environmentalists view as optimal ecologically, while on the other, nonstate governance systems with a greater direct ability to tap into ecological and social concerns of core constituencies also face more stringent “democratic” legitimacy demands.

A critical sociological approach also directs attention to the possibility of tensions in social structure. In this way, the framework can account for how it can happen that legitimacy requirements of an institution are dysfunctional for the achievement of its ultimate purpose. For example, many have argued that the universal participation norm of the Kyoto Protocol, and now perhaps the Cancun agreements, have hamstrung negotiations.⁷⁰ Moreover, the requirement to work with market forces through market mechanisms, because they focus on efficiently meeting pre-set goals, “may distract attention from clearly identifying and achieving” those goals,⁷¹ or reflect an unwillingness to develop any policy that directly threatens economic sectors they target.⁷² Nonetheless, these requirements serve to legitimate, and help solidify, the UNFCCC’s more general claim to authority over global climate governance. A critical sociological approach thus highlights that there is no necessary relationship between legitimacy and solving environmental or social problems. More positively, it provides a critical perspective from which to better understand these tensions in order to overcome them and can point to means and mechanisms to improve effectiveness and build more authoritative governance institutions.

⁶⁷ Rayner et al. 2010; and Bernstein 2011, 17–51.

⁶⁸ See Newell 2009; and Bernstein and Hannah forthcoming.

⁶⁹ Gleckman 2004.

⁷⁰ Haas 2008; Victor 2006; and Cerny 2009.

⁷¹ Haas 2008, 4.

⁷² Cerny 2009, 787–9.

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12 International organizations and global environmental governance: toward structural reform

Frank Biermann

Over the last two hundred years, humankind has evolved into a planetary force that influences global biogeochemical systems. No longer is the human species a spectator that merely needs to adapt to the natural environment. Humanity itself has become a powerful agent of earth system evolution. In particular, global warming is proceeding rapidly. The snowfields on the Kilimanjaro might melt within a few decades, and the ice cover on the Arctic Ocean has shrunk by over 30 percent since satellite observations began in 1979. Some scientists warn that major disruptions in the earth system could occur within this century.¹ The evidence of human influence on all planetary systems is such that stratigraphy experts are prepared today to formally classify the present time as a distinct epoch in planetary history, the “Anthropocene.”²

This development poses one of the largest governance challenges ever. Policy-makers in the twentieth century gained much experience in managing confined ecosystems, such as river basins, forests, or lakes. In the twenty-first century, they are faced with one of the largest political problems humankind has had to deal with: protecting the entire system earth, including most of its subsystems, and building stable institutions that guarantee a safe transition and a co-evolution of natural and social systems at planetary scale. I call this the challenge of earth system governance, as a new paradigm to describe this particular challenge of planetary co-evolution of humans and nature.³

This governance challenge is a core task for governments and civil society organizations, for local actors and national alliances, for public and private agents alike. Importantly, it is a challenge for effective international collaboration. Central here are the numerous international organizations, ranging from the many specialized agencies of the United Nations to the hundreds of secretariats to international environmental treaties.

International organizations are crucial in many ways.⁴ They influence governance through funding and administration of research, the synthesis of scientific findings, the development of policy proposals, problem frames and policy assessments, and eventually through the distribution of this knowledge to stakeholders, from national governments to individual citizens. International organizations also influence earth system governance through the creation, support, and shaping of norm-building processes. This is in particular the role of the staff of treaty secretariats, which organize meetings, set agendas and report to the conferences of the parties. International bureaucracies are crucial in shaping procedures, providing arenas for negotiations and framing inter- and transnational processes of bargaining and arguing. Last but not least, international organizations are important in helping countries to implement international agreements, for example by supporting administrative capacity in many countries.

¹ Steffen et al. 2004.

² Zalasiewicz et al. 2008, 6.

³ Biermann 2007; Biermann et al. 2009a, 2010.

⁴ See contributions in Biermann and Siebenhüner 2009; and Biermann et al. 2009b.

In short, international organizations are important agents in earth system governance. Their role is vital. However, recent research also indicates that the overall system of international organizations in this domain falls short of its potential. First, the community of international organizations and programs in earth system governance is highly fragmented, with most major international agencies running their own environmental programs, along with several hundred larger or smaller convention secretariats. In addition, earth system governance does not avail of one major international bureaucracy that is solely devoted to supporting international governance processes in this area. This situation led to a debate in academia and policy circles on the need for a larger integrated organization, such as a “world environment organization” or a “UN environment organization.” In this chapter, I summarize this debate and lay out my own vision on why an international environment organization, based on the current United Nations Environment Programme (UNEP), is an important building block for successful international cooperation. I believe that 2012 will be a crucial year to set into motion the necessary negotiation and planning processes to upgrade UNEP to a UN specialized agency.

Forty Years of Reform Debate

Proposals to create an international agency on environmental protection have been debated for now over 40 years.⁵ The first proposal for such an organization dates back to US foreign policy strategist George F. Kennan, who argued for an international environmental agency encompassing “a small group of advanced nations.”⁶ Several authors supported this idea at that time. As one outcome of this debate, in 1973 the United Nations established UNEP, following a decision adopted at the 1972 Stockholm Conference on the Human Environment. UNEP is not an intergovernmental organization, but a subsidiary body of the General Assembly reporting through the Economic and Social Council. The creation of a UN environment program was a more modest reform than the strong international environmental organization that some observers had called for at that time. Nonetheless, this reform altered the context of the organizational debate in international environmental politics – and effectively halted it.

The debate about a larger, more powerful agency for global environmental policy was revived in 1989. The Declaration of The Hague, initiated by the governments of the Netherlands, France, and Norway, called for an authoritative international body on the atmosphere that would include a provision for effective majority rule. Although not representative of the international community at the time, the declaration helped to trigger more proposals for a world environment organization that could replace UNEP. At the 1997 Special Session of the UN General Assembly on environment and development, Brazil, Germany, Singapore, and South Africa submitted a joint proposal for a “global umbrella organization for environmental issues, with the United Nations Environment Programme as a major pillar.” The broadening of the debate in the late 1990s resulted in a variety of new views about what a world environment organization should or should not do.⁷

More skeptical voices and critics of a new organization also came forward. The former head of the secretariat to the Convention on Biological Diversity, Calestous Juma, argued that advocates of a central authority divert attention from more pressing problems and fail to acknowledge that centralizing institutional structures is an anachronistic paradigm. Sebastian

⁵ Overviews in Lodewalk and Whalley 2002; and Biermann and Bauer 2005.

⁶ Kennan 1970.

⁷ Overviews in Biermann and Bauer 2005.

Oberthür and Thomas Gehring⁸ supported these concerns based on institutional theory. Konrad von Moltke⁹ and Adil Najam¹⁰ argued in favor of decentralized institutional clusters to deal with diverse sets of environmental issues rather than entrusting all problems to one central organization.

In recent years, the debate has been given new impetus by the diplomatic effort of France to create a UN Environment Organization (UNEO). In 2003, the French government circulated a proposal to transform UNEP into an “*Organisation spécialisée des Nations Unies pour l’environnement*,” which followed up on earlier French initiatives to replace UNEP by a “world environment organization.” This proposal has been emphasized by the 2007 Paris Call for Action during the Citizens of the Earth Conference for Global Ecological Governance, and supported by an intergovernmental “Group of Friends of the UN Environment Organization.” A consultative process within the UN system explored the possibility of a more coherent institutional framework for the environmental activities in the UN system. After a series of consultations with country delegations, members of the UN Secretariat and secretariats of multilateral environmental agreements, as well as with scientists, business leaders and nongovernmental organizations (NGOs), the process summarized several proposals on how to address the shortcomings in international environmental governance. Among these proposals is the establishment of a UNEO.

Virtually all proposals for a UNEO can be categorized in three ideal type models, which differ regarding the degree of change that is required. First, the least radical proposals advise upgrading UNEP to a specialized UN agency with fully fledged organizational status. Proponents of this approach have referred to the World Health Organization (WHO) or the International Labour Organization (ILO) as suitable models. Other agencies operating in the environmental field would be neither integrated into the new agency nor disbanded. The new agency in this model is expected to improve the facilitation of norm-building and norm-implementation processes. This strength would in particular derive from an enhanced mandate and better capabilities of the agency to build capacities in developing countries. This differs from UNEP’s present “catalytic” mandate that prevents the program from engaging in project implementation. Furthermore, additional legal and political powers could come with the status of a UN special agency. For example, its governing body could approve by qualified majority vote certain regulations that could be binding, under certain conditions, on all members (comparable to the International Maritime Organization), or could adopt drafts of legally binding treaties negotiated by subcommittees under its auspices (comparable to the ILO). Such powers would exceed those entrusted to UNEP, which cannot adopt legal instruments.

Second, more transformative proposals seek to address the substantive and functional overlap between the many international institutions in global environmental governance. Advocates of a more centralized governance architecture call for the integration of several existing agencies and programs into one all-encompassing world environment organization. Such an integration of environmental regimes could loosely follow the model of the World Trade Organization (WTO), which has integrated diverse multilateral trade agreements. According to some scholars, this integration could even include established intergovernmental organizations, although historic evidence suggests that this goes beyond the politically conceivable.

⁸ Oberthür and Gehring 2005.

⁹ Von Moltke 2005.

¹⁰ Najam 2005.

The third and most far-reaching model is that of a hierarchical intergovernmental organization on environmental issues that would be equipped with majority decision-making as well as enforcement powers *vis-à-vis* states that fail to comply with international agreements on the protection of global commons. The Hague Declaration of 1989 seemed to have veered in the direction of an environmental agency with sanctioning powers, and at the end of the 1980s, New Zealand had suggested establishing an “Environment Protection Council,” whose decisions would be binding. Yet support for such a powerful international agency remains very scarce. Most scholars have focused in recent years on reform proposals that are feasible in the current political context.

Rio+2012: A Chance for Revitalizing the Reform Debate

The idea of creating a specialized UN agency on environmental protection is one of the most longstanding, and most vivid, reform debates in the field of globalization and the governance of its environmental impacts. With more than 50 nations now firmly behind a concrete proposal for a UNEO, the establishment of a new agency, based on the existing UNEP, becomes more likely, at least in the medium term. Yet the extent to which this new agency would in fact advance the effectiveness of earth system governance, is certain to remain a hotly debated issue.

I have participated in this debate for 15 years by now,¹¹ and continue to believe that a world environment organization, or a UNEO, would improve the overall effectiveness of earth system governance in a variety of ways. Upgrading UNEP to a specialized UN agency would follow the longstanding policy of functional specialization within the UN system, with the United Nations organization as the focal point among numerous independent organizations for specific issues, such as food and agriculture (FAO, established in 1945); education, science, and culture (UNESCO 1945); health (WHO, 1946); civil aviation (ICAO, 1944); or meteorology (WMO, 1947). While some specialized organizations are much older than the United Nations itself (for instance the Universal Postal Union, created in 1874), most were founded simultaneously with the establishment of the United Nations, since it was felt at that time that the vast number of issues in the economic, social, or technical fields would “overstretch” the world body. Environmental problems, however, were no concern in 1945, with the term “environment” not even appearing in the UN Charter. It was only in 1972 that UNEP was set-up as a mere program, without legal personality, without budget, and – according to its founding instruments – with only a “small secretariat.” UNEP is no comparison to the other specialized organizations that can avail themselves of more resources and hence influence.

The establishment of a UN specialized agency on environmental issues could strengthen global norm building and institutionalization. One example of how this could work is the ILO. The ILO has developed a comprehensive body of “ILO conventions” that come close to a global labor code. In comparison, current earth system governance is far more disparate and cumbersome in its norm-setting processes. The general assembly of a UNEO could adopt draft treaties that have been negotiated by subcommittees under its auspices and that would then be opened for signature within UNEO headquarters. The ILO Constitution requires its parties in article 19.5 to submit, within one year, all treaties adopted by the ILO General Conference to the respective national authorities (such as the parliament) and to report to the organization on progress in the ratification process. This goes much beyond the powers of the UNEP Governing Council, which can initiate intergovernmental negotiations, but cannot adopt legal instruments on its own.

¹¹ See, in particular, Biermann 2000.

A UNEO could also be enabled to approve by qualified majority vote certain regulations, which are then binding on all members, comparable to article 21 and 22 of the WHO Constitution. Within the WHO system, certain regulations – for instance on various sanitary and quarantine requirements, nomenclatures, or safety or labeling standards – enter into force for all states after adoption by the Health Assembly with the exception of states that have notified the organization of rejection or reservations within a certain period.

Upgrading UNEP to a UNEO could moreover ameliorate a coordination deficit in earth system governance. Norms and standards in each area of environmental governance are created by distinct legislative bodies – the conferences of the parties to various conventions – with little respect for repercussions and links with other fields. While the decentralized negotiation of rules and standards in separate functional bodies may be defensible, this is less so regarding the organizational fragmentation of the various convention secretariats, which have evolved into quite independent bureaucracies with strong centrifugal tendencies. In addition, most specialized organizations and bodies, such as the UN Food and Agriculture Organization (FAO) or the UN Organization for Industrial Development (UNIDO), have initiated their own environmental programs independently from each other and with little policy coordination among themselves and with UNEP.

This problem is well known. The attempt to network individual organizations, programs and offices has been ongoing since 1972, when a first coordinating body was set-up within the United Nations. This and its successors, however, have lacked the legal authority to overcome the special interests of individual departments, programs, and convention secretariats. For earth system governance, no central anchoring point exists that could compare to WHO or ILO in their fields. Instead, there is an overlap in the functional areas of several institutions. An international center with a clear strategy to ensure worldwide environmental protection is thus the need of the hour. Just as within nation states, where environmental policy was strengthened through the introduction of independent environmental ministries, earth system governance could be made stronger through an independent UNEO that helps to contain the special interests of individual programs and organizations and to limit duplication, overlap, and inconsistencies.

Governments could also empower the new agency to coordinate multilateral environmental agreements (generally by a decision of the respective conferences of the parties). The constitutive treaty of the organization could provide general principles for multilateral environmental treaties as well as coordinating rules that govern the organization and its relationship with the issue-specific environmental regimes. Following WTO usage, environmental regimes covered by the UNEO could be divided into “multilateral” and “plurilateral” environmental agreements. For “multilateral” agreements, ratification would be compulsory for any new member of the organization, while “plurilateral” agreements would still leave members the option to remain outside. The multilateral agreements would thus form the “global environmental law code” under the UNEO, with the existing conferences of the parties being transformed into subcommittees under the UNEO Assembly. This would enable the UNEO Assembly to develop a common reporting system for all multilateral environmental agreements; a common dispute settlement system; mutually agreed guidelines that could be used – based on an inter-agency agreement – for the environmental activities of the World Bank and for environmentally related conflicts regulated under the WTO dispute settlement system; as well as a joint system of capacity building for developing countries along with financial and technological transfer.

Apart from regime building and norm setting, a UNEO could also improve the overall implementation of earth system governance, for example by a common comprehensive

reporting system on the state of the environment and on the state of implementation in different countries, as well as by stronger efforts in raising public awareness. At present, several environmental regimes require their parties to report on their policies, and a few specialized organizations collect and disseminate valuable knowledge and promote further research. Yet there remains a sizable lack of coordination, bundling, processing, and channeling of this knowledge in a policy-oriented manner. Most conventions still have different reporting needs and formats, with a certain amount of duplication. The current system is burdensome especially for developing countries, since the myriad reporting systems siphon off administrative resources that governments could use for other purposes. All reporting requirements could be streamlined into one single report to be dispatched to one single body, such as a UNEO. Instead of adding another layer of bureaucracy, a UNEO could provide a level of streamlining and harmonization that would reduce the current administrative burden, in particular for developing countries.

Importantly, a UNEO could help in particular smaller developing countries in making their participation in earth system governance stronger and more effective. One problem is that the current organizational fragmentation and inadequate coordination causes special problems for developing countries. Individual environmental agreements are negotiated in a variety of places. Recent conferences on climate change, for example, were hosted in a circular movement covering four continents, from Berlin in 1995 to Geneva, Kyoto, Bonn, Buenos Aires, The Hague, Marrakech, New Delhi, Milan, Buenos Aires, Montreal, Bali, Poznan, Copenhagen, and in 2010 Cancun.

Smaller developing countries lack the resources to attend all these meetings with a sufficient number of well-qualified diplomats and experts. Often, even larger countries need to rely on their local embassy staff to negotiate highly complex technical regulations on the environment. This system of a “traveling diplomatic circus” distinguishes earth system governance from many other policy fields, where negotiations are held within the assembly of an international agency at its seat. The creation of a UNEO could thus help developing countries to build up specialized “environmental embassies” at the seat of the new organization. This would reduce their costs and increase their negotiation influence. The same could be said for NGOs, which could participate in global negotiations within the UNEO Assembly and its committees at lower costs.

Decision-making procedures based on North–South parity – that is, veto rights for the South (and the North) as a group – could ensure that the UNEO would not evolve into a new form of eco-colonialism, as many Southern actors and observers may fear. One solution could be a double-weighted majority system in the UNEO Assembly, comparable to that of the Montreal Protocol as amended in 1990 or of the Global Environment Facility (GEF) as reformed in 1994. In both institutions, decisions require the assent of two-thirds of members that must include the simple majority of both developing and developed countries (or, in the case of the GEF, 60 percent of the states participating and 60 percent of the financial contributions). Given that the concept of double-weighted voting has been developed in the environmental field, it seems to be a good basis for voting within the UNEO Assembly.¹²

Some have argued that the environment is too complex an issue to shape the mandate for a single organization, and have hence proposed a “world organization on sustainable development” that would build on a merger (and upgrade) of UNEP and the United Nations Development Programme (UNDP) (at least). I view this option as problematic. It would be a marriage of

¹² See in more detail, Biermann and Gupta 2011.

unequals that is likely to harm environmental interests in the long run without strengthening development goals. First, UNDP and UNEP are unequal regarding their sheer size and resources. Taking into account the twelve-fold larger core budget of UNDP *vis-à-vis* the UNEP Environment Fund as well as a ratio of roughly four to one in professional staff, merging both programs would come close to the dissolution of UNEP within the significantly larger UNDP. This could result either in a strengthening of environmental goals within the development community or in the slow degrading of environmental goals in a larger new, development-oriented agency. Both UNEP and UNDP are marked by distinct organizational cultures tuned to the goals of the respective programs. Given differences in size and resources, it is difficult to believe that the much smaller “environmental” community will eventually prevail in changing the much larger “development” community within an overall new organization. It seems certain that the strength and independence of environmental concerns will be weakened over time.

This is in the interest of neither North nor South, since functional differentiation in governance systems between socioeconomic development and environmental protection makes sense. Hardly any country has opted for the administrative merger of “economic development” and “environmental protection” as policy areas at the national level. Most countries maintain the differentiation between economic or development ministries, and environmental ministries. This experience at the national level illustrates that environmental policy indeed can, and should, be addressed by one administrative unit. It is not clear why administrative functional differentiation should differ at the international level. Most international organizations and national ministries have clearly defined mandates for their respective policy areas, and it is theoretically not difficult to demarcate the responsibilities of a new international organization for the environment.¹³ All this advises against the merger of UNEP and UNDP into one program or organization.

UNEP and UNDP are also unequal regarding their functions within their respective governance areas. UNEP has an important role in agenda setting and knowledge management, for example with a view to the initiation of new treaties, the organization of international diplomatic conferences, the training of national administrative and legal personnel, or the initiation, synthesis and dissemination of new knowledge, regarding both fundamental and applied environmental science. UNDP’s core functions, on the other hand, are operational. It is mandated to generate and implement projects, with less regard to international standard setting or knowledge generation. A merger of UNDP and UNEP hence runs the risk that the different functions of UNEP will lose influence within such a larger new agency.

If, on the other hand, a world organization on sustainable development would imply merely the upgrading of UNEP to an international organization with this name, while leaving other bodies – including UNDP or the World Bank – untouched, it is unclear what consequences the choice of the organization’s name – “sustainable development” instead of “environment” – would have. This could reduce the overarching concept of “sustainable development” to a new yet deluding label for environmental protection. In sum, a world organization on sustainable development would be either ill advised if it implies the integration of UNEP and UNDP, or a misuse of a key concept of North–South relations if it merely implies giving a new name to an essentially environmental organization.

This does not imply that a UNEO should address environmental policy as unrelated to the larger quest for development. A UNEO would aim at the preservation of environmental

¹³ See also Charnovitz 2005.

resources *within* the development process, not unlike the role of environmental ministries in developing countries. A UNEO should not be seen in juxtaposition of environment *and* development, but rather within a framework of environment *for* development. The UNEO constitution would hence have to encompass more than purely environmental rules, but address the development concerns of the South as well. Therefore, general principles such as the right to development, the sovereign right over natural resources within a country's jurisdiction or the principle of common but differentiated responsibilities and capabilities need to be integrated into the constitutive instrument of the UNEO.

Conclusion

In sum, even though international organizations and bureaucracies play important roles in earth system governance, the current system of international organization and of international bureaucracies lacks effectiveness. This is partially due to a lack of standing of the core agencies in this respect and the overall fragmentation of earth system governance. I have laid out in this chapter a proposal for upgrading UNEP to a UNEO. The establishment of a UNEO would improve coordination of earth system governance; pave the way for the elevation of environmental policies on the agenda of governments, international organizations, and private organizations; assist in developing the capacities for environmental policy in African, Asian, and Latin American countries; and strengthen the institutional environment for the negotiation of new conventions and action programs as well as for the implementation and coordination of existing ones. Naturally, a UNEO as outlined here cannot solve all problems of environmental degradation. It can only be a partial contribution. Yet this should not result in a rejection of reform. A UNEO is no silver bullet. But its creation will be an important building block in improving the overall effectiveness of our efforts to protect the biogeochemical systems of the planet.

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13 Studying the global commons: governance without politics?

John Vogler

The global commons are conventionally defined as areas and resources that do not fall within the sovereign jurisdiction of states. This would include the oceans, the seabed beneath and the airspace above as well as Antarctica, outer space, the radio spectrum (possibly cyberspace) and, latterly, the global atmosphere itself. They form a tightly coupled complex – consider, for example, the many interconnections between Antarctic science, changes in levels of atmospheric carbon and its consequences, and access to outer space orbits used for earth observation. Global commons have a significant place in the study of international politics. For military analysts the problem is defined in terms of access to spaces essential for commerce and the projection of national power.¹ “Global commons” can serve as a significant rhetorical device – comprising demands for shared ownership and responsibility in the face of exclusion and privatization. For students of international environmental politics the concept provides a powerful way of framing problems as diverse as the degradation of wilderness, the looting of maritime resources, or the loss of stratospheric ozone. The key element is once again access, but in this instance the consequences of unregulated access to scarce or degradable resources, including the idea that the commons provide a free sink for pollution. Although the idea of the commons is very old, it has become inseparable from Hardin’s well-known metaphor of tragedy.²

At the global level many problems, including those of atmospheric pollution and climate change, have been represented as commons tragedies where desecration and collapse will occur if the individualistic behavior of users and national authorities is left unregulated. In response many schemes for international regulation have been elaborated, to charge for user rights, to tax aviation fuel,³ or to establish a global carbon price through a market in rights to pollute.⁴ They exist alongside a dominant legal and institutionalist approach in international relations which also sets out to deal with the particular difficulties of commons management at the international level. The starting point of this chapter is the assertion that there is an evident disparity between the scale and depth of the economic/technical/legal argumentation on commons governance and the paucity of political analysis.

The Governance of the Global Commons

The “tragedy of the commons” model captures the underlying structure of a particular class of international problem involving the management of resources beyond sovereign jurisdiction. It thus relates to one of a handful of key functions to be performed by international environmental cooperation alongside the reduction of transboundary pollution, the promulgation of common environmental standards and norms, and the regulation of trade in environmentally

¹ Posen 1993; and Denmark 2010.

² Hardin 1968.

³ WBGU 2002.

⁴ Stern 2007.

harmful goods. This is the function of providing governance or, more precisely, common property regimes for the global commons. Hardin's tragedy metaphor, where the self-interested behavior of individuals within an open-access commons, leads to overexploitation, resource collapse and consequently the "ruin of all" has become the indispensable starting point of debate. His solutions are either enclosure and privatization of the resource or the imposition of some external authority to levy charges, enforce rules, and provide public goods. For the global commons such solutions are often unavailable. It is the defining characteristic of the post-Westphalian international system that there is no centralized authority – rather, somewhere in excess of 190 territorial sovereignties. Although substantial and economically valuable parts of the ocean have been enclosed (with the 200 nautical mile exclusive economic zones (EEZs) agreed as the outcome of the Third UN Conference on the Law of the Sea (UNCLOS) in 1982) and the parceling up of the Arctic commons and even Antarctica remain a distinct possibility, it would be difficult to envisage the privatization of other global commons.⁵ Airspace may be divided into national territorial segments but not the atmosphere and stratospheric ozone layer and while there may be some doubts about the continuing property status of the space commons, key orbits and even the moon are under no imminent danger of sovereign appropriation.⁶

The social science literature that has developed in response to Hardin's "tragedy" is both rich and diverse.⁷ With empirical findings based upon the close study of local commons regimes it has arrived at the clear conclusion that Hardin's "solutions" are far from exhaustive. Instead there are many examples of self-organizing and sustainable local commons regimes that have avoided both enclosure or the imposition of centralized authority. For the student of the global commons this is important simply because it provides support for the view that effective common property resource regimes are, in principle, realizable through international cooperation. Using the commons literature also opens up the prospect of a unified social science approach that extends across spatial scales and enables us to be much more specific about the rules and decision-making procedures that are required, and to flesh out the rather simple categories that have been the stock in trade of the regime approach to international cooperation over the last three decades. For example, rather than merely referring to rules as "specific prescriptions or proscriptions for action,"⁸ it is possible by reference to work on local commons regulation to specify the rule-related functions that are likely to be required at the international level: standard setting, distribution, information, enforcement, and knowledge generation.⁹ The comparative picture that emerges through regime analysis of global commons regimes is a variegated one. It ranges from areas where there are so few international standards and there is such an absence of collective decision-making that it is difficult to speak of more than a proto-regime to others, which are heavily internationalized and institutionalized. The latter would include the arrangements for the protection of the stratospheric ozone layer, Antarctic ecology and the revised seabed regime,¹⁰

⁵ Antarctic claims were put into abeyance by the 1959 Antarctic Treaty and the commons was further protected by a 1991 Protocol that imposed a 50-year mining moratorium. The Arctic beyond national EEZs remains part of the high seas but is currently threatened by claims under the provisions of the 1982 Treaty that allowed an extension of the EEZ up to 350 nm on the basis of the continental shelf.

⁶ There was an unsuccessful attempt in 1976, by a group of equatorial countries, to assert sovereignty over the geostationary satellite orbit (GSO) in the "Bogota Declaration." Otherwise outer space, the moon and other celestial bodies are defined by the 1967 Outer Space Treaty as the "province of all mankind."

⁷ Berkes 1989; Ostrom 1990; and National Research Council 2002.

⁸ Krasner 1983.

⁹ Vogler 2000, 36–9.

¹⁰ Vogler 2000, 152–83.

while the former might include the nascent regime for the management of the growing problem of orbital debris or the minimal regulation of cyberspace.

Undertaking “cross-scale comparisons” relies upon the assumption that there are analytical similarities (or isomorphisms) between local and global commons. The essential structure of the problem is recognizable at both levels. Objections may, however, be raised in terms of the size and heterogeneity of the institutions concerned and the scale of the commons problems involved. Local commons regimes typically engage a few score people with a real sense of community and face-to-face relations. How can this be comparable with a global commons regime involving well over a hundred state members superintending resources that exist on a world scale? References to the “international community” notwithstanding, there is clearly a difficulty here. Yet there is no agreement in the local commons literature that scale and heterogeneity must determine regime effectiveness.¹¹ Stylized comparisons between local regimes, often with a long history and embedded in a local ecosystem, and formal international regimes portrayed as arrangements between state authorities may miss an essential point. This is simply that all regimes at whatever scale involve human interaction. Thus the significant community for international regimes may not be the “community of nations” but rather the restricted human communities of individuals, usually government employees and experts, who are charged with developing and managing the regime. They are usually technical and scientific experts who interact with each other in the work of Scientific Committee for Antarctic Research, the technical committees of the International Telecommunication Union (ITU), or the subsidiary bodies of the Montreal Protocol and the UN Framework Convention on Climate Change (UNFCCC). Although they may have overlapping membership with wider “epistemic communities” they should be distinguished from them because of their transgovernmental character. Many of the same social dynamics, found at the local level operate, for example, in dealing with problems of cheating and “free riding.” Witness in this respect the words of a national official involved in drawing up UNFCCC greenhouse gas inventories. He and his colleagues from other parties know each other and correspond regularly they “attend the same conferences, chat with each other and compete ... it would be almost impossible to cheat and very difficult to fake your inventory.”¹²

As well as the analytical similarities between global and local institutions the actual connections between institutions, both horizontally and vertically, have come to prominence in the study of “governance” rather than government. In terms of climate change, the vertical relationship between regimes is manifest. The problems are so ubiquitous and many layered that it makes sense to envisage a nested set of regimes. Local authorities in the West Midlands in the UK have climate change strategies, and there are national policies and targets contained in the 2008 Climate Change Act. At the regional level there is the EU’s Emissions Trading Scheme and other “effort-sharing” measures and renewable energy obligations in the 2008 Climate and Energy Policy. The EU legislation responds to the Union’s Kyoto obligations and its commitments for 2020 and is enforceable upon its member states.

There is, however, a danger of generalizing from the climate change experience. Elsewhere the situation may be quite different. Antarctica is managed by a restricted set of countries operating through small groups of government-sponsored scientists and support staff. The emergent space debris regime provides another case where only a small number of “spacefaring

¹¹ Dietz et al. 2002, 23–4.

¹² Vogler 2000, 220.

nations” are involved and the critical decisions and actions are in the hands of their government agencies meeting in the Inter Agency Debris Co-ordination Committee. In contrast, where there is a commons problem involving the coordination of very widespread human activity (atmospheric, fisheries and marine pollution regimes) there is a need to understand the vertical connections between institutions if rules are to be effectively made and enforced. Here some speak of multilevel governance – a term which has its origins in EU studies and attempts to move away from intergovernmental or federalist assumptions in studying how many groups of stakeholders, at various scales, are involved in and bring different resources to a single process. Others, drawing inspiration in particular from the commons literature speak of the significance of “institutional interplay” and “cross-scale interactions.”¹³

The Politics of the Global Commons

While acknowledging the importance of the institutional approach and the many insights that have been achieved into the effective design of regimes, this chapter seeks to make two cautionary and political points. The first relates to the largely unspoken assumptions underlying discussion of the commons problematic at all levels. The second relates to the distinctive problems of building commons regimes at the international rather than the local level.

First, commons are constructs and political constructs at that. In the past there has been some recognition of the political character of commons discourse of, for example, the Hobbesian character of Hardin’s assumptions about human behavior.¹⁴ If the tragedy of the commons is about the distribution of property rights and conflicts over the enjoyment of resources it does, by definition, have an essentially political character. Yet an explicit acknowledgment of this is often absent from the growing body of social science work on the commons.¹⁵ Instead there is a dominant concern with institutional efficiency and regulation – governance without the politics. Institutional approaches derive from an essentially positivist ontology and epistemology. Individual actors proceed by rational calculation in ways that may be considered collectively irrational and commons institutions serve to moderate behavior through reordering such utility calculations. Critical scholarship portrays this, not as an objective social science of institutions, but as a particular and inherently political “framing” in which institutions are depoliticized and local commons opened up to privatization.¹⁶ Reference to the global commons indicates a “universalizing discourse” in which local environmental problems are now presented as essentially global in character. In the service of capital accumulation: “These late twentieth-century discoveries/inventions of the globalized commons have created more than new scientific evidence: they have created new demands for global regulatory institutions and sciences.”¹⁷

One does not necessarily have to accept the world view of “political ecology” to agree with the proposition that commons are both constructed and inherently political. To describe a resource as a commons does not require that it possesses certain inherent and objective characteristics (although the economists speak of “natural commons”). Indeed the social construction of global commons dates back at least to the seventeenth-century debates between Grotius and Selden on their rival views of the status of the oceans (*mare liberum* versus *mare*

¹³ Young 2002; and Selin and VanDeveer 2003.

¹⁴ Ostrom 1990.

¹⁵ The impressive collection contained in National Research Council 2002, which runs to 521 pages has only three index references prefixed by “political” and two to “power.”

¹⁶ The Ecologist 1992; and Goldman 1998.

¹⁷ Goldman 1998, 4.

clausum). Paul Steinberg has provided us with a revealing historical analysis of the long-term construction and re-construction of ocean space.¹⁸ The way in which the Antarctic was designated as a global commons resulted from a set of fortuitous and potentially reversible political decisions taken at the high point of the first Cold War. The notion of an atmospheric commons is a recent construct in part designed to facilitate action on climate change. The contrary case of biodiversity and other resources that are generally excluded from the category is instructive. It might be argued that because forests, for example, are physically located within the sovereign territory of states they cannot represent a true global commons in the same way as the oceans or the deep seabed, even though they represent a vital part of the global ecology. Yet it is also the case that to designate them as a commons and perhaps even part of the common heritage of humankind would have unacceptable implications for property rights and the cherished economic sovereignty of states, as expressed in the 1972 Stockholm Declaration of the United Nations Conference on the Human Environment, Principle 21.

Thus we may also regard the “tragedy of the commons” itself as a powerful construct, albeit with a dubious historical basis and one that, when employed, has significant consequences for “who gets what when and where” and more especially for who is excluded. For example, Indian and Chinese have portrayed the global climate problem not so much as a commons tragedy but as a competition for the remaining “carbon space” in which emissions necessary for development have a moral priority over those of the historic industrialized emitters.¹⁹ This type of observation can be made of many commons regimes at whatever scale and provides a reason to think critically both about definitions and their beneficiaries. While it might, for instance, prompt some uneasiness about the apparently neutral and apolitical character of a term such as “institutional interplay” when used in the context of commons regimes it does not, necessarily mean that the analytical connection between global and local is invalid. Nonetheless some skepticism is in order for global scale regimes exist under the special conditions of the international system and they are, furthermore, entangled in the politics of international organization.

Global Commons Governance and International Politics

Too often commons institutions are studied in isolation. Oran Young is surely correct in his assertion that most commons analysts proceed on the “assumption that a consideration of forces exogenous to individual institutions is not essential” to the explanation of their formation, performance, and evolution.²⁰ At the local level this may be justifiable, but for global commons institutions it clearly cannot be. It is an obvious, but underemphasized, point that they remain subject to the vagaries of the international political system and the shifting priorities of powerful state governments. For the latter environmental and commons issues generally remain at the margins of governmental concern. The 1972 Stockholm Conference is often credited with spawning the development of environmental ministries worldwide yet they generally occupy a subordinate and, at present, relatively declining position in governmental hierarchies. Environmental units within foreign offices, though fulfilling an important function, are hardly at the center of foreign policy-making. In national politics (and in the politics of the European Union) environmentally beneficial policy is habitually trumped by security or economic

¹⁸ Steinberg 2001.

¹⁹ Sethi 2010.

²⁰ Young 2002, 263.

priorities. The real significance of the “environment–security” debate that occurred in the developed world during the 1990s is that securitization of an issue will serve to increase its political salience, and for some time there was evidence that this was occurring. The sustenance of the global commons and a recognition of the long-range threats posed by climate change, water shortages, desertification, and sea-level rise had started to appear on national security agendas. One effect, however, of the events of 11 September 2001 was to reorientate security thinking, and hence governmental priorities. Thus the securitization of the environment, along with much else, appears in the medium term at least, to have been eclipsed by the triptych of “terrorism, weapons of mass destruction and failed states,” although climate-related conflict in the Arctic and elsewhere may spark renewed interest.²¹ Perhaps, when applied to the desecration of the atmospheric commons the Hardin metaphor contains a central existential truth that ruin on an undreamed of scale will attend continued heedless consumption. Yet the fact that this could be represented as the most profound security challenge is understandably lost in the day-to-day political battle over immediate national and corporate interests. Such interests are well to the fore in national policy toward global commons. Examples are hardly necessary, but one could cite a lack of military interest in Antarctica as opposed to serious strategic concern with the development of the Law of the Sea and most particularly with the management of the space commons where, for example, “The United States considers the sustainability, stability, and free access to, and use of, space vital to its national interests.”²²

The observation that the effective governance of the global commons is frequently subordinated to the short-run economic and security priorities of governments and public opinion, should not obscure the fact that commons regimes are also molded by some of the deeper characteristics of the international system. It would not be too far-fetched to speak of a profound “ideational” change that has enveloped the system since the end of the Cold War. In essence it may be represented as a shift from a global-scale competition between collectivism and market-based capitalism to a situation where a single liberal orthodoxy prevails. This has left its imprint on development policies and indeed on the globalization of economic activity, but it may also be read in the evolution of the principles underlying commons regimes. Following the landmark speech of Arvid Pardo to the UN General Assembly in 1967, the idea of the deep seabed as “common heritage” rapidly took root as part of a wider campaign by the South for a New International Economic Order. In retrospect this was only possible because of the circumstances of Cold War competition and the legitimacy of the idea that there should be some equitable distribution of the fruits of a global resource that should not simply be left open to appropriation by those with the necessary financial and technological muscle. In the event the manganese nodules of the deep seabed have not proved to be easily or economically harvestable, but it is the institutional relationships that were created that were significant. They were contained in Part XI of the 1982 UNCLOS and envisaged a complex arrangement of International Seabed Authority and Enterprise which would operate to compensate non-mining states for the extraction of the metals which were designated a common heritage. By 1988 a similar, although little known, common heritage arrangement had been devised by the ITU to provide for the equitable sharing of another global commons resource, positions and associated frequencies in the GSO. While over 170 countries were awarded slots the vast majority of recipients had no possibility of actually using them. In 1979 the moon had also been declared

²¹ Council of the European Union 2008.

²² USA 2010, 3.

a common heritage, but in a treaty with significantly few signatories – none of whom was a potential space traveller.²³

Even by the time of signature of UNCLOS in 1982, the common heritage concept was already under attack by the US and its allies. The treaty lay unratified until 1994 when a revised agreement dismantled critical elements of the common heritage – replacing them with more “market-friendly” provisions such as to allow US ratification. There was never any possibility that the newly constructed atmospheric commons would be declared a common heritage (still less Antarctica). The UNFCCC is careful to note that it, like biodiversity, is a “common concern” and the supremacy of market instruments is established.

The UNCLOS experience indicates how global commons regimes will be affected by the prevailing power structure. The possibility of centralized authority is envisaged in theoretical discussions of solutions to the tragedy of the commons and aligns, in studies of international regime formation, with the hegemonic stability thesis. The development of most of the contemporary global regimes occurred in a period when, despite discussions of loss of American hegemony, it was not clear that such leadership was available. Establishment of new arrangements, such as the Antarctic Treaty or wholesale modification of the existing institutions covering the oceans or outer space were dependent upon bargains agreed by leading states in the international system in the context of the Cold War. These, as has previously been pointed out, were as much conditioned by a range of strategic and other considerations, as they were by the endogenous features of the “tragedy” or potential tragedy. For around two decades after the collapse of the Soviet Union the primacy of the United States became the key structural characteristic of the system. Even before the arrival of the administration of George W. Bush it was becoming evident that the United States would not exploit its supremacy in ways that would have benign consequences either for multilateral cooperation or for the sustenance of global commons regimes. From 2001 the US stance toward the Kyoto Protocol shifted toward outright opposition and political wrecking activities and on occasion joining forces with surprised nongovernmental organizations (NGOs) to demand access rights for non-parties!²⁴ The mantle of leadership in the climate change and number of other regimes fell upon the European Union. It ensured the development and ratification of the Protocol in 2005 but was unable to sustain its leading role in the attempt to engineer a new climate agreement at Copenhagen in 2009. The United States re-engaged, but not with the Kyoto Protocol and there were other changes in the international political structure that emerged during the first decade of the twenty-first century, partly as a consequence of economic globalization. Most notable was the growing strength of fast-developing economies of the South (the BRIC countries: Brazil, Russia, India, and China) acknowledged by the creation of the G20 for international economic diplomacy. The full consequences of this structural change will be played out over many years across the global commons, but one immediate effect was to transform the climate conference at Copenhagen into a negotiation between the USA and the BASIC countries (Brazil, South Africa, India, and China) driven by their national energy requirements and related emissions.

An essential criticism of Hardin’s model is that it neglects another tragedy that has been a historical consequence of commons “solutions” – we may refer to it as the “tragedy of

²³ The references are to Appendix 30B to the Final Acts Adopted by the Second Session of the ITU World Administrative Radio Conference (WARC) 1988 on the use of GSO and the Planning of Space Services Utilizing it and to the 1979 UN Agreement Governing the Activities of States on the Moon and Other Celestial Bodies.

²⁴ Ott 2002.

dispossession.” As Mark Imber has noted, the commons never meant much to those too poor to possess a pig to graze upon them.²⁵ For those villagers that did, enclosure solutions frequently resulted in destitution and increasing disparities of wealth, but the effects were offloaded on to the local parish or resulted in bands of “sturdy beggars” who roamed Elizabethan England. Commons (mis)management at the local level does not seem to have been seriously disrupted by economic inequality. However, if this dimension of commons use is scaled up to the international level, the situation is quite different. The international system is characterized by extraordinary economic inequalities, as are many individual societies. But at the international level the demands of the dispossessed can receive serious political expression through the actions of a majority of states, especially within international organizations (IOs). Thus, virtually all the major discussions of global commons issues have occurred within the context of demands for developmental justice in North–South relations.²⁶ The necessary political juxtaposition between environment and development has been evident since the 1972 Stockholm UN Conference on the Human Environment and has been a recurrent theme. It was central to the debates over the seabed and common heritage and over “equity in orbit.” Although the Antarctic regime was managed by a set of self-selecting Antarctic Treaty Consultative Parties (ATCPs) even they could not be immune from demands for the inclusion of developing world representation, couched in the demand to bring the regime within the ambit of the United Nations. This demand has been resisted but the ATCPs have been careful to strengthen their position by recruiting China and India as new members. The development of the global stratospheric ozone regime required that compensation be arranged (in the 1990 London Agreement) for potential developing world producers of chlorofluorocarbons (CFCs). Construction of the climate change regime was predicated on the recognition of the “common but differentiated responsibilities” of members and the controversial duty of the developed Annex I Parties to take the initial steps in greenhouse gas emission reduction. The relationship between environmental degradation of the commons, poverty, and sustainability is a very complex and shifting one which has, at the UN, reflected the priorities of developing countries. The very rapid development of some southern nations and the fact that by 2007, China had become the leading emitter of carbon dioxide and that both China and India had emerged as substantial players in the maritime and space commons has led to a situation in which it is no longer possible to think in terms of a coherent G77 bloc of developing countries.

A further important difference between local and global commons management is that the former are not obliged to operate through IOs. Here it is important to make the, often neglected, distinction here between institutions and organizations. Some of the discussion of global governance serves to confuse because it conflates the two. Institutions and organizations are not the same – and governance is not a synonym for organization although it often seems to be so. Local commons regimes, like global regimes, can be portrayed and compared as social institutions performing equivalent governance functions. However, they will not exhibit the same degree of formal organization. It is true that there are examples of global commons regimes that existed without being superintended by IOs. The permissive oceans regime of the nineteenth century or the Antarctic regime which existed very effectively, until 2001, without a permanent secretariat provide examples. However, the dominant trend has been to build formal IOs. It would be possible to cite a very long list, the International Whaling Commission, the

²⁵ Imber 1988, 154.

²⁶ Vogler 2007.

ITU, UNEP, the International Seabed Authority, the Secretariats and Conferences of the Parties of the atmospheric regimes, and so forth.

IOs have a peculiar politics of their own. They appear to be almost impossible to close down as they acquire secretariats, budgets, and their own set of interests. Governments, too, may often be more concerned with their rights and status within organizations rather than the issues that are formally on the table. Even NGOs have been known to become overly concerned with their own rights of access to IOs. Organizations provide the framework for and the arena within which the politics of the global commons are conducted. They are necessary for the international production and legitimation of scientific knowledge and for the provision of multilateral funding but they also add a great deal of complexity. This is particularly so when it comes to decision-making where in the words of EU Trade Commissioner Pascal Lamy their practices are “medieval.”²⁷ His observation was directed at the body that he was subsequently to lead – the World Trade Organization – but it would equally apply to the one state, one vote procedures that apply in most environmental IOs and conferences of the parties. For over 20 years the UNFCCC has provided a clear example of the complexities, even ossification that can occur when commons deliberations are extensively organized within the structures of a global convention (the prolonged UNCLOS negotiations of the 1970s provide another example). However it is difficult to conceive of effective alternatives that will suffice to maintain political momentum, inclusiveness, and legitimacy.²⁸

As well as causing complication and delay the internal processes of IOs can also represent a source of organizational power for the otherwise weak. The G77 and China, if united, could always command plenary majorities sometimes leading to the kind of counterintuitive outcomes that could not be predicted, either by reference to studies of institutional design or by a simple application of the prevailing power distribution. A characteristic of some key global commons regimes is that they reflect high levels of interdependence among users. In consequence new avenues of organizational power are open to those who can threaten to block or impede the working of a valued regime.²⁹ There is evidence of this factor at work in the “common heritage” and it played a part in the long-drawn-out UNCLOS negotiations. It was also significant in the development of the climate change regime, evolved under the auspices of the General Assembly, where the UNFCCC would not have been negotiable without a clear understanding on the differential obligations of developed and developing nations. The underlying circumstances that made this possible have now, of course, altered. Finding an effective alternative to the “common but differentiated responsibilities” formula that incorporates the BASIC countries in mitigating greenhouse gas emissions in the future while respecting their development priorities represents the critical conundrum for climate negotiators.

Conclusion

The use of the commons concept has a number of analytical advantages for the study of international environmental cooperation. Not the least of these is the way in which it connects with a rich seam of literature on local commons regimes that have evidently managed to avoid Hardin’s trap and that allow us to consider the similarities between governance institutions at various levels. Another advantage is that there may now be significant actual and potential

²⁷ Lamy 2003.

²⁸ Depledge and Yamin 2009; and Falkner et al. 2010.

²⁹ Vogler 2000, 193–5.

connections – in multilevel governance and “institutional interplay.” The interconnection between the local and global institutions is clearly a coming theme. However, there are also some serious problems with this approach for it tends towards the depoliticization of the global commons and the neglect of the political struggles which must bear upon the creation and operation of institutions. The study of commons management can become just that – a preoccupation with the scientific design of optimal institutional reforms and the refinement of international law. Both have demonstrated great vitality – dare we say progress – in the last two decades. There has been a thickening institutionalization with new concepts of precaution and implementation review and a new understanding of the integration of science with policy. One should not underestimate the significance of institutions and their interconnections but it must also be understood that they and the metaphors that sustain them are politicized constructs. The “interplay” between them will be a political relationship in which organizational and other struggles are fought out. For global policy-making, the political salience of the commons issues at stake in the domestic system of the United States will often be critical along with their fit with the development agenda. Also, the emergent BASIC countries of the South have become much more significant in the politics of all the global commons in a way that makes previous undifferentiated reference to North–South divisions increasingly inaccurate. International action to sustain the global commons has to proceed through the thickets of international organization, all some distance from the simplicities of the “tragedy” model. If reliance on the latter leads to an exclusive concern with governance rather than the complex politics of the global commons, it is likely to lead to disappointment.

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14 Long-term environmental policy: definition–origin–response options

*Detlef F. Sprinz*¹

A government might, for instance, want to discourage building in areas prone to hurricanes. So it warns citizens that no compensation will be given for houses in such areas should disaster strike. If people believe the warning, they will not build. But if they expect (as history suggests they should) that the government is likely to soften its stance and pay for hurricane damage after all, they will ignore the warning. Before the fact, the government wants to stop building; afterwards, it wants to compensate those who have suffered. Mr Kydland and Mr Prescott refer to such conundrums as “time consistency problems.”²

It appears that we are surrounded by long-term policy problems. Public and private pension plans for the elderly are currently redesigned so as to close the gap between implicit and explicit entitlements given out in the past and the ability to actually honor those financial obligations; public debt sharply restricts the opportunities for politicians to enjoy the fruits of the pork barrel in countries such as Germany, Japan, France, or Italy even before the onset of the financial crisis in the early years of the twenty-first century. Public healthcare systems seem to be stretched in many industrialized countries; global climate change, if unabated, may lead to severe sea-level rise and subsequently dislocate substantial parts of the earth’s population that lives in proximity of the coastal areas. Could even the 2005 Hurricane Katrina point to the emergence of a long-term policy problem?

Sustainability, interdependence, globalization, and other terms have made a career by being imprecisely used. In the following sections, I first define long-term policy problems in general. Subsequently, I outline three explanations that shed more light on potential sources of long-term policy issues, followed by a discussion of policy options to cope with long-term environmental problems. Throughout this contribution, I shall draw on examples from the field of global environmental politics. I close with an agenda for future research on long-term environmental policy challenges.

Defining Long-term Policy Issues

Before elaborating the mechanisms that generate long-term public policy challenges, it is useful to define core terminology.

Long-term policy challenges will be defined as public policy issues that last at least one human generation, exhibit deep uncertainty exacerbated by the depth of time, and engender public goods aspects both at the stage of problem generation as well as at the response stage.

¹ The first and the last substantive sections of this chapter originate, largely verbatim, from my editorial contribution to the special issue of *Global Environmental Politics* on the theme of long-term environmental policy (Sprinz 2009a, “Long-Term Environmental Policy: Definition, Knowledge, Future Research,” *Global Environmental Politics* 9 (3), August 2009: 1–8, reprinted by permission of the publisher (MIT Press); and Sprinz 2009b. Select aspects of the sections in between have appeared earlier in highly condensed form (Sprinz 2008). For comments on an earlier draft, I am grateful to Jana Ollmann.

² “Cycles and Commitment,” *The Economist*, 14 October 2004. Available at http://economist.com/PrinterFriendly.cfm?Story_ID=3292902, accessed 09 June 2011.

First, a long-term problem exists only if the mechanism creating it leads to substantial adverse effects for at least a human generation of 25 years or if the remedy would take an equally substantial amount of time. Global biodiversity may offer us a potent example: if species of flora or fauna become extinct and have no functional proxies, both the species and the functions they fulfill for ecosystems could be lost forever. Even ambitious research and development efforts may find it difficult to create functional proxies, for instance by genetically modifying still existent organisms.

Second, deep uncertainty, “a situation where the system model and the input parameters to the system model are not known or widely agreed on by the stakeholders to the decision,”³ refers to the breadth of parameter values that we may contemplate. For example, there is considerable uncertainty regarding the price of carbon offsets under various choices of policy instruments, and we have no experience with accurately predicting the price of carbon offsets for a 50 percent emission reduction over the next half century or the value of any natural resource or ecosystem.

Third, public goods aspects of long-term policy problems relate both to the generation of long-term policy challenges as well as ways to respond to them. Quite often, long-term policy challenges are generated by externalizing some cost to the public, both contemporaneously as well as inter-temporally. For example, if historical carbon emissions already lead to uncompensated climate-related impacts today, then some past decision-makers will have benefitted, knowingly or unknowingly, from carbon releases at the expense of present generations. In addition, curbing future emissions is a public goods problem by itself in a mostly decentralized world. Those countries serving as leaders in international climate policy may not witness immediate benefits for themselves, and future benefits may be quite uncertain, thereby tempting only a small range of countries to venture into global public goods production – and others to free ride.

Overall, long-term policy problems pose a rather difficult class of challenges that are beyond the scope of single parliaments and political as well as bureaucratic tenures in office, and yet many have escaped comparative research so far.

Some environmental issues can be easily solved: water can be purified with considerable ease and often at affordable cost, species can be reintroduced if they are still existent somewhere (for example, seed banks or zoos), classical air pollutants can be filtered, severely polluting chemicals replaced by less toxic ones, and so on. Climate change, loss of biodiversity, depletion of the stratospheric ozone layer, and desertification are perhaps the most prominent examples of global environmental challenges. In the case of climate change, the multi-decadal release of emissions of greenhouse gases (principally carbon dioxide, methane, and nitrous oxides) are still effective long thereafter and alter the state of the atmosphere. A shift of most energy systems from substantial reliance on fossil fuels to renewable energies will easily take a human generation or longer. Various aspects of biodiversity are of an equal long-term nature, with species extinction representing the ultimate irreversibility.

Overall, long-term policy challenges are not unique to the environmental field, yet long-term environmental policy challenges are likely to stay with us for decades to come. As a consequence, they are likely to influence the long-term policy agenda, especially if voters become more aware of how central they are to their quality of life.

³ Lempert 2002, 7309.

Why Long-term Policy Issues Arise

Why do long-term problems arise? In essence, there are three major explanatory routes. First, the time inconsistency problem may loom and not allow for consistent policy-making over time; second, even if multiple generations are included in decision-making, a coalition of older generations and segments of younger generations may support intergenerational redistribution; and third, the distribution of risk and votes may be conducive to the rise of long-term policy issues. In the following, I shall briefly sketch these three perspectives and offer response options in the context of global environmental politics in the subsequent section.

In their seminal work on time inconsistency, Kydland and Prescott⁴ demonstrate that optimal choices at one point in time may be at odds with optimal choices taken at future points in time. Policies may be designed such that one policy rule is administered in the first period, for example, encouraging low inflation by way of wage restraint. However, at a later point in time, it may be the best policy to actually permit some degree of inflation so as to reduce short-term unemployment. More generally, governments are tempted to renege on earlier promises. “The suboptimality arises because there is no mechanism to induce future policymakers to take into consideration the effect of their policy, via the expectations mechanisms, upon current decisions of agents.”⁵

For example, if it is not forbidden to build houses in flood plains, people will build houses in such locations while anticipating that the government will ultimately build dams so as to protect them or compensate them for flood damages incurred. This example was actually mentioned by Kydland and Prescott in 1977 (!),⁶ well before Hurricane Katrina damaged New Orleans and surrounding areas. Expectations about future policies impact on current behavior. Thus, these problems resemble moral hazard problems with a long-term time dimension. It would have been preferable to forbid erecting housing in such areas and stick to the announced rule of no dams and no compensation. Had such an announcement been perceived as *credible*, no houses would have been built in risk-prone areas or only been built by risk-taking investors, and governments would have been saved from paying compensation.

A second perspective on why long-term policy challenges may arise originates from models of intergenerational redistribution. For example, Tabellini⁷ builds a simple two-generation model where the parent generation lives for two periods while the children generation only lives for one period, that is, they overlap for one period when they also take common decisions. While both generations receive initial endowments financed through government bonds, the parental generation also receives unequal amounts of non-storable output, and it can bequeath parts of its wealth to its offspring. By assumption, this transfer of wealth is only possible by way of government bonds, while both generations are taxed.

Since the parental generation commands a first-mover advantage, it can issue debts, but it faces the risk that the children’s generation reneges on repaying those bonds in the second period. In his model, Tabellini⁸ demonstrates that a coalition of parents and wealthy children supports the issuance of public debt, although this has intergenerational redistributive effects. The logic supporting the finding that wealthy children favor not to repudiate debt is that they would otherwise endanger their bequests. Furthermore, repayment of debt is broadly distributed

⁴ Kydland and Prescott 1977.

⁵ Kydland and Prescott 1977, 481.

⁶ Kydland and Prescott 1977, 477.

⁷ Tabellini 1991.

⁸ Tabellini 1991.

among the children's generation and thereby intragenerational redistribution occurs. For the findings to hold, the debt originally issued must be large enough and sufficiently widely spread so that a coalition of parents and children supports such a policy and does not renege on servicing the debts.

Applied to the environmental field of pollution, the parental generation may be interpreted as the generation that has built the industrial infrastructure that leads to negative environmental externalities which are subsequently passed on to the children's generation. Even if the children's generation might muster a majority against polluting infrastructures among itself, it is plausible that a coalition of large parts of the parental generation with the disproportionately benefitting members of the children's generation might muster a majority that does not allow for reasonably fast policy change. Furthermore, infrastructures are often built for long timeframes and are inherently difficult to replace.

A third perspective is offered by Stone⁹ who suggests that agent-specific risks are unequally distributed. Given the need for majoritarian support (for example, in first-past-the-post electoral systems) or *de facto* supermajority requirements in international institutions, public goods are suboptimally supplied. As a result of the skewed distribution of risks and votes, we are likely to witness suboptimal states of the environment, especially with global environmental problems.

In his writing, Stone himself offers climate change (besides international financial stability) as a superb example to illustrate his model. Much of the recent waves of climate impact research indicates (for example, by way of illustrative maps) the projected changes of droughts, harvests, species composition, ocean sea levels, and so on. These differences are often regionally explicit and vary considerably around the world. Once we combine (i) these differences in expected levels of climatic impacts with (ii) the absence of widespread support among the G20 of major countries and economies behind ambitious and implementable climate policy goals, it becomes apparent that we are witnessing an undersupply of protection against climate change. The protection of biodiversity offers similar perspectives due to the unequal distribution of biodiversity hotspots and the varying capacities and enthusiasm for the protection of biodiversity.

In summary, the time-inconsistency challenge, the intergenerational transfer of externalities, and the combination of unequal distribution of environmental risk in the face of (super)majority requirements for ambitious policies are three mechanisms that let us better understand why long-term environmental policy issues arise.

Response Options

Given the existence of long-term problems, it is beneficial to know from which menu of options policy-makers could make selections. This exploration comprises select response options, including:

1. the "sugar daddy" solution;
2. delegation;
3. transparency; and
4. liability.

⁹ Stone 2009.

Sugar Daddy Solution

Perhaps the most straightforward solution is to buy out the constituency that accounts for the problem. I shall coin this the “sugar daddy” solution¹⁰ in an allusion to proposals by the European Commission to compensate the European sugar beet industry for downsizing under conditions of falling prices on the world market for sugar cane. In this particular case, the adjustment is essentially financed by third parties, namely the taxpayers of the EU in return for lower consumer prices. In essence, an external financier who is capable of solving the long-term policy problem has to be found.

Is this a plausible solution in the environmental field? The global environmental governance system as well as multilateral and bilateral green aid add up to modest amounts¹¹ and are largely targetted to developing countries. Overall, it is unlikely that any of the major long-term environmental problems, such as biodiversity, climate change, or soil degradation, can be solved by third parties footing the bill – worldwide or for developing countries.

Delegation of Authority

The second response option has been foreshadowed by Kydland and Prescott¹² when they proposed the creation of political institutions that follow rules over time and which are detached from day-to-day political pressure:

The implication of our analysis is that policymakers should follow rules rather than have discretion. The reason that they should not have discretion is not that they are stupid or evil but, rather, that discretion implies selecting the decision which is best, given the current situation. Such behavior either results in consistent but suboptimal planning or in economic instability. ... There could be institutional arrangements which make it a difficult and time-consuming process to change the policy rules in all but emergency situations.¹³

The adherence to rules and its positive implications for government credibility had a substantial impact on the design of institutions for monetary policy, especially the rule-based expansion of monetary aggregates that many central banks adhere to following the 1970s period of stagflation. In the environmental field, the idea of an energy agency that manages carbon emissions and secures energy supply has been suggested.¹⁴ Such an agency should be governed by conservative carbon bankers in analogy to Rogoff’s “conservative central banker” in the monetary policy area.¹⁵

Credible commitment by independent institutions could also be useful for other air pollutants such as ozone-depleting substances that negatively impact the stratosphere, or for determining the number and types of fish that can be caught during a harvest period. Delegation of authority, however, does not seem easily applicable to issues such as the issue of biodiversity which simultaneously deals with securing the survival of species, whole landscapes, diversity of species, and so on. This can potentially be generalized to a range of environmental issues where a multitude of proximate causes rather than one class of proximate causes (for example, pollution emissions) are at work.

¹⁰ “Sugar Subsidies: Beet a Retreat,” *The Economist*, 23 June 2005. Available at http://www.economist.com/printedition/PrinterFriendly.cfm?Story_ID=4112150, accessed 09 June 2011.

¹¹ Najam et al. 2006; and Hicks et al. 2010, ch. 2.

¹² Kydland and Prescott 1977.

¹³ Kydland and Prescott 1977, 477–87.

¹⁴ Helm et al. 2003.

¹⁵ Rogoff 1985.

In general, wherever the credible pursuit of just one rule or the non-conflicting pursuit of multiple rules leads in the desired direction, the delegation of authority to independent institutions and decision-makers can increase the credibility of commitment to long-term environmental policies.

Transparency

Environmental reporting on the international scale has become both more prevalent and more regular during the past decades. Regular reporting is a major tool to enhance transparency by providing information to broader audiences that are thereby enabled to hold decision-makers inside and outside of governments accountable for their (in)activity.¹⁶ While governments often commission national environmental reports, companies increasingly create their own (sometimes multinational) environmental and corporate social responsibility reports. Furthermore, a range of network-based reporting initiatives have flourished.¹⁷ Climate change even became the topic of a major report by Transparency International.¹⁸ Of more direct relevance to the issue of long-term environmental policy are environmental reports by supranational and international organizations that cover broader sets of countries or the world at large.

In general, these reporting activities cover the state of the environment, explain the causal mechanisms behind longer-term past trajectories as well as provide an outlook into the future and may offer select guidance on how to cope with pertinent environmental challenges. In the following, two such regular initiatives will be summarized, namely those by the United Nations Environment Programme (UNEP) and the European Environment Agency (EEA).

Over the past one-and-a-half decades, UNEP has produced four Global Environment Outlooks (GEOs) which have covered both the environmental regions and major classical environmental themes. The latest incarnation, Global Environment Outlook 4,¹⁹ uses a traditional classification by environmental media (atmosphere, land, water, and biodiversity) as well as crosscutting sections on vulnerability (worldwide maps), and governance issues. In the pursuit of integrated assessments, GEO is supported by a data portal.

In comparison to the global mission of UNEP, the EEA is tasked to harmonize and lead the European-wide work of environmental agencies of EU member countries as well as those of Iceland, Liechtenstein, Norway, Switzerland, Turkey, and potential future West Balkan members. Much of its work rests on standardized procedures for data and their European-wide evaluation through the shared environmental information system as well as related data centers. Every five years, the EEA is tasked to provide a synoptic overview of its environmental reporting by way of its “State and Outlook” reports. Much like UNEP’s GEO reports, it reviews the state of environmental media, yet in much finer thematic resolution. It is supported by a range of supplementary reports, an overview of the “megatrends” which drive global environmental change, and select country reports.²⁰

Both reporting activities are time- and resource-intensive undertakings that aspire to provide a data-based grand overview of the state of the environment for their respective geographic coverage (with the EEA supporting the European regional component of GEO), and they shed

¹⁶ Gupta 2010b.

¹⁷ For a recent overview, see Gupta 2010a.

¹⁸ Transparency International 2011.

¹⁹ UNEP 2007.

²⁰ EEA 2010.

light on potential policy priorities. These reporting activities may be the best we have at this point in time, yet they also seem to be suffering from lack of simpler metrics of transparency. For example, the field of inter-temporal public liabilities, a measure of the net indebtedness of public authorities (in terms of net public debts and the costs of the modern welfare state over the next century) has generated easy-to-communicate aggregate results that policy-makers may consider in preparing their policies in view of mounting public financial obligations.²¹ Would an environmental decision-maker, looking at the plethora of data and graphs across the various environmental media and potentially crosscutting themes, gain a succinct overview of the state of the environment, past achievements, and the (finite) priorities to be tackled in the future? Relevant indices have to be developed in order to provide decision-makers with a succinct overview, a dashboard on where we stand, as well as benchmarks for “perfect” policy performance in order to allow for policy evaluation. Such indices and benchmarks would facilitate communication with broader audiences as well as create a foundation for the non-arbitrary derivation of policy priorities to manage long-term environmental challenges.

Compensation

It is astonishing to see the difference in liability and accountability that chief executives of private firms face as compared to political decision-makers. Politicians and bureaucrats essentially face only the threat of not being reelected or not being re-appointed. Private sector CEOs have to fear being sued for civil damages (implying a threat to their private wealth) and being subject to criminal law and imprisonment. For example, recklessly sending a private company into bankruptcy normally constitutes grounds for exploring personal liability of private sector CEOs. Until now, politicians rarely face such threats in advanced industrial societies, although the scope of their decisions may easily trounce those of the private sector. This could lead politicians to be more risk taking than they would be in the case of more adequate rules of liability.²²

Liability for public decisions of an intergenerational nature has at least been considered in a US court case of environmental nongovernmental organizations (NGOs) against the Overseas Private Investment Corporation and the Export–Import Bank. At issue are those decisions of both entities that have climate impacts on US cities. By 2009, both banks have agreed in a court settlement to take climate concern into account in their future decisions. To provide insurance against the effects of earthquakes, the California Earthquake Authority has built a publicly backed private insurance system that allows for homeowners to insure against damages that are likely to occur over longer time intervals in earthquake-prone areas. To avoid undue moral hazard, policy holders must normally accept a 10 to 15 percent deductible.

Long-term environmental impacts will occur. A specific form of “insurance” could be the creation of structured compensation funds for damages not avoided. In the areas of transboundary nuclear impacts as well as oil spills from tankers, compensation systems have been created, and the market for compensating oil spills is frequently used.²³ Generalizing on work with Steffen von Büнау in the area of climate change,²⁴ let me suggest a fourfold architecture:

²¹ Raffelhüschen 2002, 84, 86.

²² Sprinz 2005.

²³ A detailed perspective is offered by Sprinz and von Büнау 2011.

²⁴ Sprinz and von Büнау 2011.

1. Derivation of an ambitious benchmark (for example, no exceedance of the 2°C change in global mean temperature for global climate change since the onset of industrialization; halting the loss of species in the field of biodiversity);
2. a court-like adjudication procedure that links causes with effects (for example, greenhouse gas emissions with climatic impacts, habitat fragmentation with lack of sustainable reproduction);
3. a simple formula that links responsibility with contributions to a compensation fund (for example, share of emissions determines share of compensation in the area of climate change; fixed shares to hosts of biodiversity of ultimate proceeds from access to genetic resources of biodiversity under the Nagoya Protocol²⁵); and
4. an actor or group of actors which initially endows the compensation fund (for example, a major green donor country, or an environmental NGO, or an environmentally concerned industry group).

While any such structured compensation systems raise the issue of unilateralism, credibility, and generalizability, they offer a constructive alternative to appearing empty-handed later on in the absence of building up a compensation fund.

In conclusion, I have considered four possible solutions to design institutions to deal with long-term environmental problems. In particular, the sugar daddy solution, delegation of authority to independent institutions, transparency, and compensation have been briefly considered. The broader set of possible response options and the invention of completely new options ought to be the privilege of further research.

An Agenda for Research

Given the early stage of research on long-term environmental policy, I suggest three overarching questions which would greatly benefit from sustained research due to their generic character, namely (i) how to overcome the time-inconsistency problem in practical political life, (ii) whether democracies and decentralized political systems can successfully pursue long-term environmental policies, and (iii) institutional design options to prevent and recover from undesirable long-term policy outcomes.

First, the *time-inconsistency* problem relates to the choice of optimal rules at time t_0 to actual rule adherence at t_1 when political circumstances might have changed and rule adherence at t_1 might not be optimal for decision-makers at that point in time. The possibility of this happening creates incentives to doubt the rule's credibility at time t_0 . For example, Europe wished to halt biodiversity loss by 2010 although many of the biodiversity hotspots are located outside the EU. It is all too easy to criticize a political actor for holding on to ambitious goals and yet it is also sometimes too easy to promulgate ambitious political goals whose impact can only be evaluated far in the future. While the work by Kydland and Prescott provided the academic rationale for the creation of independent central banks, it is unlikely that a forceful World Environment Organization will materialize in the near future. Thus, we are left with multilateral governance. While the world has harnessed new insights from the solution to the domestic time inconsistency problem, the equivalent of Kydland and Prescott's solution at the decentralized international level remains an open challenge. Building decentralized and

²⁵ Secretariat of the Convention on Biological Diversity 2011.

voluntary compensation systems for damages or for the maintenance of environmental quality is merely a first step in this direction.

Second, it is often doubted that *democracies* can pursue long-term policies due to the structured length of terms of the legislative, executive, and judicial branches.²⁶ Moreover, decentralization of authority, as is typical with global environmental issues, may pose additional challenges to governance. The former aspect refers to electoral terms in office. Political or legal careers in high office rarely last multiple decades. Winston Churchill's career as a democratic leader may be an exception, yet it perhaps provides some clues as to why he could survive *and* return to office. He often held principled policy positions, accepted to be out of office when such positions did not garner sufficient support, and was returned to office when such positions became attractive to the (s)electorate. Churchill opposed the Munich agreement of 1938 when many, such as Neville Chamberlain, thought that "peace for our time" was secured. In turn, he was a credible choice of democratic leader to withstand the German onslaught on Britain during World War II. The same dual clocks of relatively short-term electoral cycles (Churchill was voted out of office during the Potsdam conference of 1945) and long-term policy goals (withstand Germany during World War II) should be simultaneously modeled to see under which conditions time-limited democratic governments can survive and which characteristics their leadership personnel would have to offer to successfully pursue long-term policies.

Furthermore, how can political systems with *decentralized political authority* pursue ambitious long-term environmental problems? The German federal constitution (Grundgesetz), for example, grants authority for protecting nature to the *Länder* (states) such that the German federal government may face implementation hurdles at the level of EU directives on nature protection issues. Conversely, around 20 major countries including the EU are needed for any long-term international strategy on climate change to have an appreciable impact. It therefore remains an open question how grander political designs, if any, can reconcile decentralized political authority with the successful pursuit of long-term environmental challenges, given the time inconsistency challenge mentioned above and the domestic and international political challenges discussed elsewhere.²⁷

Third, long-term environmental issues may engender a quest for *institutional response options* to prevent unwanted outcomes or to recover from such outcomes after prevention has failed. The term "prevention" refers to the avoidance of an unwanted outcome. By contrast, "recovery" refers to having already reached the unwanted outcome, followed by subsequent attempts to substantially improve the state of the environment. This may include aiming for a return to a more desirable status quo ante.

Preventing biodiversity loss is, in the extreme, an impossible goal to pursue. We simply have no complete inventory of all species. We may lose species even without knowing that they ever existed. Nevertheless, halting the loss of biodiversity espouses some conceptual clarity: prevent losing a good (material and immaterial). The suggestion for the creation of "conservation systems"²⁸ presents a forward-looking perspective. The required characteristics for conservation systems to be successful are demanding. Can we derive a finite, relatively small set of design principles that allows us to move a desirable state of a specific environmental object (landscape,

²⁶ See also Sprinz and Aklin 2011 for a discussion and empirical results on the long-term effect of democracy on per capita carbon emissions.

²⁷ Hovi et al. 2009.

²⁸ Steinberg 2009.

river shed, or species) through an infinite “time tunnel”? Do design principles vary by spatial or temporal resolution?

A range of coastal and high seas fishing grounds have been overfished during the second half of the twentieth century, particularly in the North Atlantic, and serve as a good example of the recovery perspective which may take decades or longer. The focus of research ought to be directed toward how long-term sustainable yields and rich abundance in species can be substantially improved from an undesirably low level. Scholarly interest should be directed to institutional design options which might combine, for example, solutions to the time-inconsistency problem with solutions to the decentralization challenge in authority for open-sea fisheries.

Climate change can be seen as a combination of prevention and recovery modes. Article 2 of the United Nations Framework Convention on Climate Change explicitly directs member countries to “prevent dangerous anthropogenic interference with the climate system” (UNFCCC, Article 2). The Copenhagen and Cancun agreements of 2009 and 2010 lend credibility to the 2°C goal as a representation of the ultimate objective of global climate policy. Unfortunately, we are unlikely to prevent severely overshooting this goal given current emission reduction policies around the world. Moreover, we have to consider the recovery challenge. While there is plenty of research on both mitigation (prevention) and adaptation (akin to recovery) to climate change, the appropriate mix between both and the reciprocal strategic impact between them remains an open question for research.

The list of research challenges outlined above is suggestive, yet certainly not exhaustive. Finding convincing answers would undoubtedly advance our knowledge on how to manage long-term environmental challenges more wisely for present and future generations alike. X PRIZES have been created to establish whether private business can build spacecrafts that fly 100 km above the earth (prize awarded) and whether extremely fuel-efficient cars with more than 100 miles per gallon gasoline equivalent can be built (prize awarded). These large prizes intend to create entrepreneurship to pursue goals with potentially widespread benefits to the public. Perhaps some of the research questions outlined above on the management of long-term environmental issues are worth an X PRIZE themselves?

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15 Global environmental politics and governance: a networks and flows perspective

Arthur P.J. Mol and Gert Spaargaren

The changing nature, role, and functioning of states in global environmental politics and governance is one of the central themes that cuts across the disciplinary boundaries within the social sciences. Especially following globalization, scholars from political science, public administration, social geography, sociology, international relations, and environmental studies, to name some of the major fields, have developed various perspectives, theories, and analyses to understand the changing nature of the state and politics in dealing with contemporary global environmental challenges. While most scholars agree that conventional, state-centered, international relations perspectives are no longer adequate in understanding global environmental governance, no single theory has yet emerged as a dominant alternative interpretation scheme. We see a variety of ideas on how to understand current trends and developments in governing global environmental change.¹

One of the new perspectives on (global) environmental politics and governance, developed with sociology but slowly diffusing into other disciplines, focuses on networks and flows. This perspective might be of particular interest as it does not take states or societies as units of analyses, or as the privileged categories under study. Rather, it sees networks and flows as key constituting categories of the architecture of global modernity; and hence it argues that if we are to understand today's global environmental politics and governance we have to understand how networks and flows function and can be governed. This means a radical deviation from the longstanding tradition of seeing states and societies as the main categories through which we are to understand globalized modernity, and also as far as that relates to (global) environmental governance.

This chapter introduces and reviews the network and flow perspective. First, we elaborate on the core ideas of networks and flows as developed in general sociology. Subsequently, we shall further detail what the consequences of this sociology of network and flows perspective are for analyzing and understanding global environmental politics and governance. Subsequently, the analytical value of this perspective and its relevance to environmental governance are illustrated by connecting the network and flow perspective to the case studies of global biofuels and emerging carbon markets.

Social Theories on Networks and Flows

The second half of the 1990s witnessed the emergence of what we can now label the “sociology of networks and flows”. The foundation of a new sociological perspective, a new social theory or even “new rules of sociological methods”² is generally not established by one publication and a single author; in this case we find several scholars, among which Manuel Castells, Saskia Sassen, John Urry, and Ulrich Beck, at its foundation. Of course, these – and other – authors

¹ Sonnenfeld and Mol 2011.

² Urry 2003.

diverge to some extent in their conceptualizations and elaborations on how they think a new social theory for the twenty-first century should look. But they seem in agreement about the centrality of networks and flows for the new sociological focus. Crucial in the development of the sociology of networks and flows is the shift from (nation) states and societies as central units and concepts of analysis, to networks and the flows of capital, people, money, information, images, goods/materials, viruses, and so on traveling through them. As Castells³ puts it: “Ultimately, the traditional notion of society may have to be called into question.” Networks and flows form the true architectures of a global modernity. Hence, the sociology of networks and flows is very much tied up with processes of globalization and include the shift away from “methodological nationalism” toward methodological cosmopolitanism.⁴

Castells’ trilogy *The Network Society*⁵ was one of the first major works that triggered widespread social science attention to networks and flows as central concepts. Acknowledging the major contribution of Castells to the new perspective, we shall nevertheless start with using John Urry’s⁶ work on the sociology of mobilities to operationalize and detail these concepts. Following Annemarie Mol and John Law,⁷ Urry suggests that networks and flows operate in three spatial patterns or modalities, distinguishing among regions, Global Integrated Networks (GINs), and global fluids. Regions consist of objects, actors, and relations (networks) primarily clustered geographically, often within one country. They are characterized by fixed and solid relations within a nation-state container, showing “directional” mobility of flows, constrained by the fixed boundaries of that region. This is the typical modality that dominated the pre-globalization era. GINs consist of more or less stable, enduring, and predictable relations between nodes or hubs, stretching across different regions, with relatively walled routes for flows to follow. GINs cross national boundaries and thus become deterritorialized, although place-based moorings ensure that they do not become footloose. They deliver the same kind of outcomes at all nodes, with limited forms of adaptation to local circumstances: “its products are predictable, calculable, routinised and standardized.”⁸ Large multinational corporations (for example, Shell, IMB, Nokia), agro-food networks, state-based networks (EU), and civil society network organizations (such as Greenpeace and the Worldwide Fund for Nature: WWF) are typical examples. Global fluids are spatial patterns structured neither by boundaries nor by more or less stable relations, but by large flexibility, liquidity, gel-like movement, and permeable boundaries. Fluids demonstrate no clear point of departure or arrival, no linear patterns and sequential dependencies. Instead they represent rather unpredictable, deterritorialized movements with no necessary end-state or goal. Migrating people, financial capital, the internet, social movements and – as we shall illustrate in this chapter – carbon credits and finance are typical examples. The notions of unpredictability, nonlinearity, and complexity as they are so central to Urry’s⁹ analysis of “global complexity,” are especially related to this latter modality of fluids.

Hence, the sociology of networks and flows puts global flows, global network dynamics and what Castells¹⁰ labels “the space of flow” – rather than localities, static practices, the space of

³ Castells 2009, 18.

⁴ Beck 2005.

⁵ Castells 1996, 1997a 1997b.

⁶ Urry 2000, 2003.

⁷ Mol and Law 1994.

⁸ Urry 2003, 56–7.

⁹ Urry 2003.

¹⁰ Castells 1996, 1997a, 1997b.

place, and nation states – on the research agenda. It is through the former concepts and social entities that global modernity can best be understood. The idea of solid boundaries and fixed clusters, especially within a nation-state/society container, should at least be complemented – if not sometimes replaced – by cross-border or borderless global flows and networks. But this shift of analysis should not end up with placeless perspectives on network and flows. Notwithstanding processes of disembedding, deterritorialization, delocalization, and the increasingly footloose and stateless character of global financial, economic, and information flows, Saskia Sassen,¹¹ Ankie Hoogvelt¹² and others have convincingly argued that such global flows have to be processed at places (the metropolitan cities), that they originate their profit from places and that they have to “settle down” in places. In addition, we often see that the tension and contradictions between the “space of flows” and the “space of place” are put central in critical analyses of the destructive developments in global modernity, and also where it relates to the environment. While some conclude that the environment needs to be protected from the intrusion of global flows on local places only by place-based resistance,¹³ others point at the inclusion and articulation of environmental protectionism in the space of flow in the forms of global environmental standards, green capital, global environmental movement networks, and global environmental management concepts and norms.¹⁴

Networks, Flows and Global Environmental Governance

Although at first the theoretical literature on networks and flows barely touched upon environmental issues, we witness some changes over the recent past. Both general social theorists and environmental social sciences scholars have started to apply these notions, schemes, and concepts to the analysis of global environmental change.

The idea of flows, or environmental flows, is not new in the environmental social sciences. Environmental flows have been the object of analysis and studies from the 1970s onward, for instance in material flow analysis and industrial ecology perspectives in environmental studies¹⁵ and in the additions-and-withdrawals perspective that was so strongly put on the research agenda in environmental sociology by Schnaiberg (1980) and colleagues. What the sociology of networks and flows adds to – and how it changes the agenda of – twentieth-century environmental social sciences becomes clear when one compares the additions-and-withdrawals¹⁶ perspective that has been central in post-Schnaiberg environmental social sciences with this new network and flows perspective in the environmental social sciences.¹⁷ The additions-and-withdrawals perspective remained primarily region focused, static, state oriented, and place bound. However, analyzing environmental pollution, natural resource depletion (and the governance thereof) only or mainly via clustered relations and patterns in regions around which (nation-state) boundaries are drawn, has become untenable in the heightened modernity of the global network society. Under conditions of globalization,

¹¹ Sassen 1994, 2006.

¹² Hoogvelt 1997.

¹³ For example, Castells 1997b; and Gille 2006.

¹⁴ For example, Mol and Spaargaren 2006; and Sassen 2006.

¹⁵ For example, Graedel and Allenby 1995; Fisher-Kowalski 1997; and Weizsäcker et al. 1997.

¹⁶ The “additions- and-withdrawals” perspective refers to the work of Schnaiberg (1980). Although Schnaiberg uses a specific neo-Marxist or political economy analysis, the idea of additions (pollution) and withdrawals (natural resource extraction) flourishes widely in various environmental social science traditions, in most environmental studies paradigms and in hands-on theories used by policy-makers.

¹⁷ See Mol and Spaargaren 2005.

environmental devastation and governance have acquired new dimensions and dynamics, as they are operating in new spaces, beyond place-bound localities. Understanding the new dimensions and dynamics of environmental reform in the global space of flows implies working with new perspectives and methodologies.

A sociology of networks and flows broadens the conceptualization of flows as practiced in environmental sociology. It brings the definition of flows beyond the narrow material interpretation, in terms of pollution and extraction, which has been dominant in environmental flow analyses so far. When analyzing mobile flows and fluids, an environmental social sciences of networks and flows also takes into account the environmental dimensions of transport mobilities, the flow of green capital and investments, traveling plants and animals, the market of green products, and even the mobile flow of environmental concepts and norms. Hence we witness the application and further development of this kind of environmental social sciences in a much wider variety of studies, among others on food, food trade and food labeling,¹⁸ on mega-events such as the Olympics and world expos,¹⁹ on the greening of global office buildings,²⁰ on biodiversity movements and mobilities,²¹ and on auto mobility and the car system.²²

When using these kinds of flow analyses, it is recognized that the sustenance base of society is no longer external to society, but instead – as Ulrich Beck²³ has argued convincingly – pulled into society. As a result, the key flows and their dynamics involved in sustainable development take on a hybrid, socio-material character. The application of the notion of hybrids in social theory and research can have far-reaching consequences, ranging from an emphasis on systems approaches, to a neglect of agency, a strong emphasis on technology and artifacts, and a preference for complexity sciences instead of more disciplinary approaches.²⁴ But recognizing and emphasizing the hybrid character of networks and flows (and thus moving away from oversocialized analyses of nature and avoiding simple dichotomies of nature and society), does not necessarily imply ending up with (complex) system theories only. Also within the network and flows perspective, we see a number of conceptualizations being developed that aim to (i) take on board the hybrid socio-material character of flows while they (ii) continue to conceptually distinguish from these hybrids the natural and the social.

When discussing the relevance of the emerging network and flow perspective for global environmental governance, the most important theme to elaborate has to do with the changing character of the nation state in the global network society and the new meanings to be assigned to concepts such as power, authority, and governance.

Power and Authority

Networks and flows, scapes, and socio-material infrastructures can no longer be properly understood when relying only on the basic scheme of (national) states operating in the context of (globalizing) markets and a more or less developed civil sphere.²⁵ New conceptualizations of states (network states), markets (network companies), and civil society actors (international

¹⁸ Bush and Oosterveer 2007; and Oosterveer 2007, 2008.

¹⁹ Mol 2010b; and Mol and Zhang 2011.

²⁰ Presas 2005.

²¹ Van Koppen 2006.

²² Urry 2008; and Kingsley and Urry 2009.

²³ Beck 2005.

²⁴ For a more elaborate account of this, see Mol and Spaargaren 2006.

²⁵ Alexander 2006.

nongovernmental organizations in particular) invades the social sciences and in the end bring us “beyond society” as understood in terms of a demarcated social, national, and geographical unit.²⁶ As a consequence, in the environmental social sciences of networks and flows²⁷ the ideas of power, authority, and governance need to be thoroughly revised.

Power in networks is related to access, inclusion and exclusion, and control over flows, both through being on and off the network and through power relations inside the network. According to Castells,²⁸ it is the power elites operating at the most crucial nodes of global networks that know best how to handle the switches, codes, and programs that govern global flows of money, capital, and information, at the expense of the ordinary people who hardly have any access and control. The socio-material networks that “structure” the mobility of flows are shaped by these power relations; but they also “structure” power positions around these flows, the access “rights” to the flows, and the strictness of boundaries for different kinds of flows. The ability of states – as one of the power containers – to regulate mobilities differs between the three modalities. With respect to regions, states are still major governing actors and power containers, although under conditions of globalization they are no longer able to govern social patterns and regularities in some detail. With GINs, states have become even less able to act purposefully in regulating mobilities – that is, to influence the direction, speed, form, contents, and outcomes of mobile flows. In order to be relevant as governance actors, states have to reinvent themselves by assuming new roles in supra and transnational arenas of power.²⁹ The relevance of states and directional governance decreases even further and in a more radical way with respect to global fluids. Global fluids are barely touched by activities of nation states, nor are state authorities important constituting forces in the structuring of the socio-material infrastructures (or scapes) that underpin the mobility of flows.

But power and authority (as legitimate power) are subject to change in still another way. Saskia Sassen’s³⁰ work *Territory, Authority, Rights* helps us to understand how authority structures change in what she calls the shift from a nation-state assemblage to a new networked global assemblage (see Figure 15.1). In a similar manner, we can apply this analysis of the changing nature of authority to the transformation and relocation of environmental authority under conditions of globalization and global environmental change.³¹

Different forms of environmental authority have “jurisdiction” over different territorial stretches. State authorities have jurisdiction over the national territory, which is adequate when environmental polluters and pollution remain restricted to national territories. With globalization however, polluters, pollution, and extractions are no longer restricted to and contained within national entities; they are to be found in the global arena, in inter/supra-national arrangements and in networks and flows which criss-cross and perforate borders. Hence, environmental authority has developed beyond what Ulrich Beck referred to as the “nation-state container.” Besides international and supranational authorities (various multilateral environmental

²⁶ Urry 2000.

²⁷ There is considerable variety in how power and governance are looked upon in the various contributions to the sociology of networks and flows. In Urry’s (2003) work questions of politics, power, and governance are reconsidered in the light of emerging global complexities and the disappearance of agency in its conventional form. Authors such as Beck (2005), Sassen (2006), and Castells (2009) are less drastic and straightforward in discounting the power of (network) states, transnationals, and civil society networks in global governance.

²⁸ Castells 2009.

²⁹ Beck 2005.

³⁰ Sassen 2006.

³¹ See Spaargaren and Mol 2008.

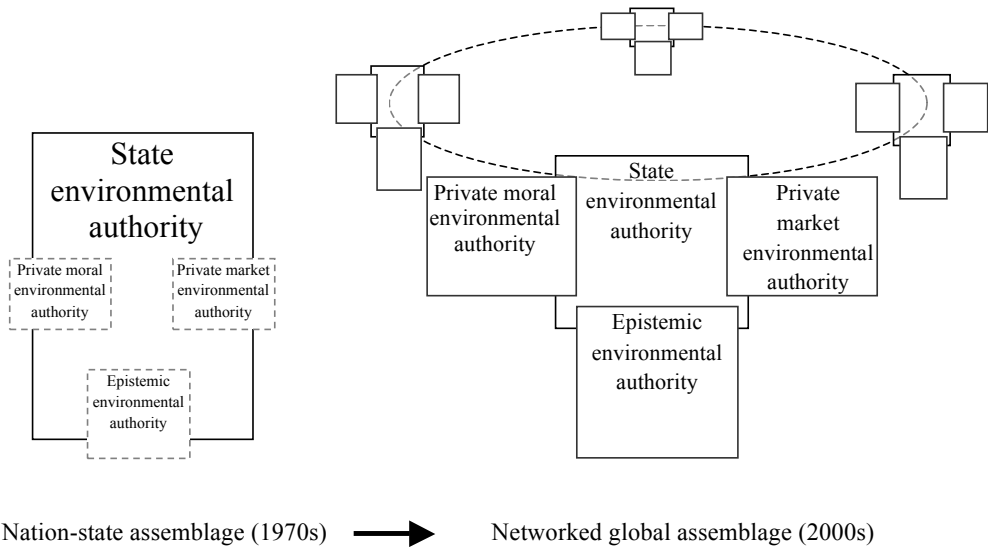


Figure 15.1 From a national to a global networked assemblage of environmental authorities

agreements; the EU), other forms of environmental authority with a wider geographically stretch, become relevant. As a result, both market authorities and civil society-based “moral authorities” come to govern actors situated in multiple localities within a global assemblage of multiple nation states. But the same localities can also be governed by the authority of city networks (local agenda 21, climate city networks) and epistemic communities with their scientific authority. Thus the demonopolization of state environmental authority comes together and combines with the growing importance of other, nonstate forms of environmental authority. It is not that these nonstate environmental authorities did not exist under the nation-state assemblage. At the time, however, they operated largely within, and were subsumed by, a dominant state environmental authority. Under the present global conditions, the new forms of environmental authority have gained analytical weight and are equally tied up with demands of legitimacy when exercising environmental control.

Often this lost monopoly of state environmental authority through globalization is criticized by environmental social science scholars, who still argue from the basic idea that common goods need to be governed by public authorities. But with globalization new environmental authorities become relevant, while at the same time state-based environmental authority changes in character, among others through the denationalizing of state capacities (with growing “state” authorities beneath and beyond the national state). For instance, we witness the shift of public regulatory functions to the private sector; the proliferation of private agents – with their rules and norms – to handle domains once exclusive to governments; and the circulation of private norms and aims through the public domain, where they are represented as being public. In various cases the mounting market authority is activated for governing public goods – such as the environment – or the common good. And such private authority of, for instance, business associations, private waste collection systems and market-based systems of standardization, accounting and control cannot be invalidated by just identifying them as market-based forms

of authority. These new forms of environmental authority need to be judged in their own right, using criteria of effectiveness, efficiency, fairness, and democracy. In addition it can be argued that globalization does not only bring along infringements of market authorities on public authority. We also witness networks of nongovernmental organizations (NGOs) – mobilizing and drawing upon their globally shared, civil society-based sustainability norms and values – which facilitate and help shape forms of private “counter-authority” against the increasing power, logic, and authority of the market. Globalization opens up new spaces for such private moral authority of civil society actors and institutions operating outside or at the fringes of established political and economic systems.

De-territorialized forms of authority (that is: authority delinked from a national territory) and the shift from state to market, moral and other authorities become relevant categories for the governance of global flows. Although no longer contained by nation states, the new authorities of global reach are still shaped, channeled, and enabled by institutions and networks rooted in (the territory of) nation states. So: while global flows of green capital, environmental goods and services, and environmental information – as well as the environmental authorities governing them – seem to become independent of territory and place, they do not become footloose since they are still in the spaces of place to a considerable extent. Global flows also dwell in localities where local cultures, local networks, and local conditions matter in shaping, enabling, handling, and channeling global flows. Hudson’s³² analysis of the relevance of region and place in the context of global environmental change offers a nice illustration of these glocalizing dynamics.

From our short excursion into the (environmental) sociology of global networks and flows we conclude that within the present-day global assemblage we see new, de-territorialized, denationalized, network-based forms of environmental authority and governance emerging. These new forms of environmental governance and authority bring, among other things:

- a new role and function for traditional state authorities, which have to reinvent themselves;
- a larger and, in terms of power relations, more significant role for nonstate environmental authorities;
- networks – especially networks of programmers and switchers – rather than autonomous institutions becoming the main constituting units for governing environmental flows; and
- new global – local – global interdependencies with neither the local nor the global having analytical priority.

With two cases of global environmental governance we seek to illustrate how such a network and flow inspired analysis can make us aware of the new governance structures and dynamics at work in global modernity: biofuels governance and carbon market governance.

Biofuels Governance: From Regions to Global Integrated Networks³³

Liquid biofuels – both bioethanol and biodiesel – have existed for quite some time but especially since the late 1990s they have gained a global increase in popularity, beyond Brazil. At the

³² Hudson 2007.

³³ This section is partly based on earlier publications, such as Mol 2007, 2010a; and Oosterveer and Mol 2010.

same time crop-based liquid biofuels have become contested, both with respect to their interference with food production as well as for its environmental sustainability (climate change, biodiversity, and a range of local environmental problems). Hence this calls for environmental and sustainability governance of biofuels. But such calls for environmental governance comes along with the increasing mobilities in biofuels investments, trade and consumption through globally stretched networks, challenging the governing abilities of state-based environmental authority structures.

Up until the middle of the first decade of this millennium biofuels have largely been governed through national governments promoting the growth of biofuel crops and the processing of these crops into bioethanol, biodiesel and to a much lesser extend other products. Governments in most countries³⁴ have been stimulating this market through protective measures against foreign competition; through subsidizing farmers, ethanol and biodiesel processing companies, and biofuel end users such as car manufacturers, taxi drivers, car hire companies, public transport, and so on (via tax reductions, soft loans, credit facilities); through large R&D programs; through experiments with various transport technologies and programs; through market creation by setting mandatory targets for biofuel use in gasoline and diesel; and via a number of other policies and measures. As long as the major share of biofuels was consumed domestically, and imports and foreign investments were limited, governments were able to remain in some control. But with increasing international trade of fuels and biomass for fuels, with expanding – inbound and outbound – foreign direct investment (FDI) in plantations and processing units, with the development of a world market and with global – rather than national – players, their control is clearly reducing. American, Brazilian, and other front-running businesses see major commercial opportunities in supplying advanced equipment to countries in, for instance, the Caribbean, Central America, and Africa. Oil companies have started investments in production facilities in biomass rich regions. And public and private actors secure access to land in other countries and regions, so-called “land grabbing.”³⁵ These developments question the relevance of understanding biofuel developments and governance in terms of national biofuel scapes. We should interpret biofuel developments over the past five years in terms of increasing discussion, debate, proposals and criticism of governance and regulation in terms of a global scape for biofuels. Several issues characterize this move toward a global scape: free trade, certification and standardization, and new power relations.

Free trade and protectionism is high on the biofuels agenda. In order to protect their own farmers, the US has followed a protective policy toward biofuel imports, especially from Brazil (but not from many Caribbean countries). But with growing demands for feedstock from the growing number and capacity of US-based ethanol plants, major demands on US farmers for higher production levels of corn, and increasing prices of corn, this protectionism is coming under pressure. In 2007, a switch took place in the US standpoint of mere trade restriction, linking up with Brazil, the EU, China, India, and South Africa in launching the UN International Biofuels Forum, which aimed to develop international standards, open markets, encourage investments in industry, and make biofuels globally marketed commodities. The standard view is that such trade liberalization would decrease prices of biofuels, and thus enhance substitution of fossil fuels for biofuels.³⁶ But that needs to go together with harmonization and standardization. Fuel

³⁴ This is true for all the major biofuel producing countries, such as Brazil (sugar cane for ethanol, soy for biodiesel), the US (maize for ethanol), Germany (rapeseed for biodiesel), and Malaysia (oil palm for biodiesel).

³⁵ Bräutigam and Xiaoyang 2009; and Friis and Reenberg 2010.

³⁶ For example, Steenblik 2006.

specifications for biodiesel (strongly dependent on the source material) have developed differently in the US and the EU, for instance, endangering global trade. With emerging global markets, there is a need for global collaboration on standards and specifications related to biofuel quality. But there is still considerable lack of clarity as to how biofuels fit into the existing trade regime. Should they be seen as agricultural, industrial, or environmental goods, which has consequences for the subsidies allowed?³⁷ How should they be classified and what kind of import tariffs fall upon them?³⁸ While protective measures in terms of tariff barriers would need to be broken down (and there seems to be increasing consensus on that), is that also the case for subsidies to domestic primary producers, processors, car manufacturers, and other user categories? And what would be the consequences of a World Trade Organization (WTO)-based trade regime for domestic regulations and standards (for example, mandatory use of biofuels, fuel content requirements)? And perhaps most importantly, how would a trade regime on biofuels deal with criteria with respect to sustainability related to the production methods of biofuels,³⁹ such as increasingly being proposed by several governments and NGOs? While this is not the place to enter into the specifics of a biofuels trade regime,⁴⁰ the direction of discussions and developments among the main state and economic actors that make up the current global biofuels network is clear: further harmonization and uniform standardization of biofuel products, markets, and public regulatory regimes. Overall, there is a tendency toward standardized products, which can be detached from the local space of place and be transferred in a global integrated network with a uniform scape. At the same time we do not yet see a clear institutionalization of biofuels trade within the WTO framework.

In absence of – and as an alternative for – clear WTO rules, often certification and labeling is seen as an institutional arrangement that could bring the specific place-based environmental and social interest into the global space of flows.⁴¹ And indeed, with respect to the emerging global integrated biofuels network a similar call for certification and labeling systems can be heard, or such systems are partially getting in place. Brazil has a Social Fuel Seal for biofuels, guaranteeing biofuels produced in the benefit of poor farmers. Several environmental NGOs,⁴² local farmer organizations, scientists,⁴³ national state authorities, and governance arrangements (for example, in the Netherlands articulated by the Cramer Commission,⁴⁴ in the UK through the Low Carbon Vehicle Partnership, in the US the National Ethanol Vehicle Coalition) and international organizations have called for and proposed voluntary or mandatory certification schemes, including a variety of interests and objectives (local environment, food sovereignty, labor, biodiversity, climate change). But these labeling and certification schemes meet a number of governance challenges: (i) which criteria should be included; (ii) how should these be set;

³⁷ See Dufey 2006; and Howse et al. 2006.

³⁸ See Loppacher and Kerr 2005.

³⁹ As the growth of biofuels goes together with the advancement of genetically modified (GM) crops (especially in maize, soy, and sugarcane GM technologies are widely spread), this further spreads the GM controversy and the controversy regarding the legal base on which to govern GM crops (see Loppacher and Kerr 2005).

⁴⁰ Others have called for a specific International Biofuels Agreement (Mathews 2007) or a UN Agreement on Bio-energy (Verdonk et al. 2007), which could specify several of these points in addition to further commitments of OECD countries toward developing countries (see also Oosterveer and Mol 2010).

⁴¹ Oosterveer and Mol 2010.

⁴² For example, the European Environmental Bureau sees a system of certificates relating to the production methods of biofuels as a condition *sine qua non* for further increase of biofuel production and use. The Institute of Science in Society (2006) comes with a similar claim.

⁴³ Verdonk et al. 2007.

⁴⁴ Cramer Commission 2006.

(iii) how to ensure that emerging markets (China, India, Russia) are receptive to voluntary certified sustainable biofuels; (iv) how to move from the dozens of certification schemes to one harmonized global scheme. Furthermore, interests of the major players diverge. The EU tends to be leading in setting conditions for biofuels, using mandatory criteria based on their biofuels directives and preventing voluntary initiatives. Transnational agribusiness and oil industry tend to be rather critical toward any sustainability labeling and certification, although some collaborate with major NGOs in setting up voluntary schemes. Several biofuel-producing developing countries have labeled such conditionalities “green imperialism,” restricting them to profit from their comparative advantages in natural resources. Other developing countries collaborate strategically with business, NGOs, and developed states in designing voluntary schemes (as in the Round Table for Sustainable Palm Oil Production; and the Round Table for Sustainable Biofuels).

With the emergence of such a global playing field and global biofuel scape, and the interdependency and increased merging of the biofuel scape with the fossil fuel scape, power relations change dramatically. Harmonization, standardization, certification, and globalization of biofuel flows include and empower those (large) actors organized and operating beyond region networks, as they are better able to co-construct and work within the global socio-material infrastructures. Developing states, local farmer cooperatives, and localized NGOs are not empowered through an increasingly globalizing scape, as their access to and power in these networks are limited. They are unable to set the rules, use them and change the structure of such global socio-material infrastructures that “govern” biofuel flows. But also more developed states are increasingly seeing their authority undermined in setting and implementing conditionalities for biofuels, perhaps with the EU as the notable exception. Large-scale farming and plantations, major processing units of transnationals, global trading networks of biofuels and biomass, increasing FDI and global platforms for discussion, exchanging and developing biofuel rules are the preferable mode that “fits” this evolving scape. Although we witness various initiatives to try to protect small scale farming and local small biofuel business (for example, the United Nations;⁴⁵ the Cramer Commission in the Netherlands;⁴⁶ the Low Carbon Vehicle Partnership in the UK; the National Ethanol Vehicle Coalition in the US), these initiatives row against the major biofuel flows.

Hence, in terms of a network and flow perspective, since half a decade ago biofuels and its governance can no longer be conceptualized as a region: as objects, actors, and relations (networks) primarily geographically clustered, often within one country. The biofuels scape has developed into a global integrated network, in which a variety of public, private, and hybrid environmental authorities are involved in attempts to govern the sustainability of such biofuels. In these networks and arrangements states are still relevant power containers, among several others; but we can no longer understand sustainability challenges and developments around biofuel mobilities from a “state and society” perspective. In addition, environmental governance arrangements are not just related to reducing environmental impacts on well-defined territories; rather environmental governance aims to influence the flows of biofuels, in terms of its contents, definition, origin and direction, volume and speed. Who has access to the networks and flows, and who controls and influences the switches and codes that define the flow characteristics is of vital importance in understanding power in the global biofuel scape.

⁴⁵ United Nations 2007.

⁴⁶ Cramer Commission 2006.

Carbon Market Governance: Between Global Integrated Networks and Global Fluids

Since at least the mid-1990s, climate change has been dominating environmental agendas, first especially in developed countries but by now around the world. A wide variety of strategies and measures are proposed and implemented to mitigate climate change, at different scales. Increasingly, market-based measures are preferred for a variety of reasons. Newell and Paterson⁴⁷ rightly conclude that “climate politics are increasingly constructed by, through and for markets.” Many of these (market-based and other) measures and strategies have a clear nation-state focus, as nation states are still important actors, institutions, and platforms for climate change mitigation. But new institutions, less related to nation states, are emerging. The design and implementation of carbon markets is arguably one of the most far-reaching new institutions. Transnational carbon markets form the best evidence that market institutions in climate change mitigation (i) are no longer restricted to what Ulrich Beck⁴⁸ calls the “nation-state container,” and (ii) have gained in importance. Various carbon markets have been developed over the past decade and these become increasingly interlinked. Globally, the 2009 value of the various carbon markets was \$144 billion, more than double their 2007 value. The US Commodity Futures Trading Commission “estimates that the carbon derivative market could be worth \$2 trillion USD by 2017.”⁴⁹

But global market institutions in climate change mitigation are not undisputed, and debates amplified when the recent financial crisis made the world aware of the vulnerability of global financial markets. Carbon markets, as governing institutions for combating climate change, face a number of questions. The most fundamental central question is whether the various voluntary and regulatory carbon markets are still linked to and fulfilling environmental rationalities; or have they become just economic/financial markets where profits and economic players fully overrule environmental logics and actors? And if so, have carbon markets similar inbuilt crisis tendencies as financial markets?⁵⁰

With the installment of voluntary and regulatory carbon markets⁵¹ as major institutions to conquer climate change, and the tendency toward their further integration globally, questions of governance move beyond states and societies, toward the networks that design and determine the flows of carbon credits; the codes, programs, and institutional design of carbon markets; and the actors that have (and control) access, inclusion, and exclusion to these global carbon networks. In exploring the (future of) globalizing carbon markets and their role in climate change governance, we shall follow to a significant extent analyses of global financial markets, where currently discussions and proposals on their reregulation emerge.

Global financial flows should be conceptualized as global fluids: deterritorialized movement of finances and financial products without clear directions, walled routes, and end states. System complexity theory explains, and failing predictions of economic models show, that we cannot easily foresee and predict major and sudden shifts or collapses of financial systems. That is in

⁴⁷ Newell and Paterson 2009, 80.

⁴⁸ Beck 2005.

⁴⁹ As cited in IATP 2009, 3.

⁵⁰ See Chan 2009.

⁵¹ Voluntary carbon markets are defined as all purchases of carbon credits that are motivated by drivers other than regulatory compliance. Currently, two major voluntary markets exist: the Chicago Climate Exchange and the broader non-binding over-the-counter offset market. The much larger regulated carbon markets are driven by regulations and can be distinguished into Kyoto Protocol regulated markets (Clean Development Mechanism (CDM), Joint Implementation (JI), and Emissions Trading (ET), especially the EU Emissions Trading System) and various regional initiatives, especially within the US.

line with the low governance capabilities of such global fluids, as Urry⁵² and others have theorized. But that does not mean that financial markets are just abstract systems unrelated to agency. Crotty⁵³ and Christophers,⁵⁴ among others, argue that we should not just blame abstract complexity for the financial crisis but rather the specific way the financial system is organized (the New Financial Architecture) of which those in charge were co-constructors. The growing global integration of financial markets came with government deregulation, private self-regulation, and specific constructed characteristics/flaws that drove the financial system into near collapse: perverse incentives (such as bonuses) creating excessive risks, development of complex financial products that could not be priced correctly, banks keeping rather than insuring risky financial products, risky assets that were kept off-balance and thus invisible, fundamental but known flaws in risk assessment systems through value at risk models, tightly integrated credit markets that amplify crisis in one product at one location across the globe, and the poor functioning of private credit rating agencies in the system due to self-interests. According to Crotty and others,⁵⁵ reregulation (that is, strengthening public financial authority structures) of the financial market is key in preventing future catastrophic financial crises.

So where are the parallels with carbon markets? Also with respect to the carbon markets, there exist worries about the growing complexity and thus manageability of (future) carbon markets. Carbon markets are starting to witness similar complexities as financial markets; or as Bailey⁵⁶ puts it: “The resulting [carbon] market is undeniably complex” and “Complexity is a typical feature of a functioning market and not in itself problematic.” The growing complexity in instruments, the expanding number and complexity of traded products, the global spreading and integration of markets, and the global reach of flows and actor networks in carbon markets, make the market more liquid, but also conceal hazards and uncertainties, and make the market less transparent (for market players, for private and public governing bodies, and for environmentalists). It is especially the growth of the secondary market that increases complexity, and attracts major market players far beyond the conventional climate change community of polluters, environmental authorities, and environmental advocates. Hence the core of the network that is involved in channeling carbon market flows has shifted toward large investors, major banks, energy companies, speculators, hedge funds, lobbyists, central banks, large consultancy companies, finance and trade ministries, and the International Monetary Fund.⁵⁷ This all makes the system settings, dynamics, and rationality of the global carbon market increasingly tend toward those of financial markets, endangering environmental additionality in carbon credits.

But compared to the pre-2009 financial market (with its light state regulation of commercial banks and investment banks, and the almost absent regulation of the shadow banking systems of hedge funds, private equity and special investment vehicles), the current carbon market is still significantly government organized. Different from the financial market, the design of carbon markets rests still significantly with (inter)governmental agreements, with ongoing political debates on, among others, how to issue allowances, the progressive setting of caps for specific periods, the percentage of caps to be covered by carbon trading compared to domestic

⁵² Urry 2003.

⁵³ Crotty 2009.

⁵⁴ Christophers 2009.

⁵⁵ For example, Stiglitz 2010.

⁵⁶ Bailey 2010, 149.

⁵⁷ See Schneider et al. 2010.

emission reductions, requests for government interventions for price stabilization, and transparency of monitoring, registration, and verification of credits. Hence, it is to a significant extent a politically generated and managed market, with a compliance aspect related to greenhouse gas emission reduction.

This difference in political and regulatory involvement between financial and carbon markets has at least two explanations. First, carbon markets are still very much in their initial design stage, where political decision-making has to design and determine the scapes, rules, and arrangements of the carbon market. Once a global integrated and mature carbon market is institutionalized and functioning, it might start to look more like financial markets in this respect. Second, the difference has to be explained by the normative goal of efficient climate change mitigation that carbon markets have to fulfill in order to remain legitimate. Such a normative goal is absent in financial markets. This normative goal would imply that regulatory involvement of state authority would always be larger in climate markets compared to financial markets, regardless of its (initial or mature) stage.

If carbon markets have to primarily fulfill environmental goals of efficient greenhouse gas emission reduction, stringent design, monitoring, and regulation of this market need to be put in place. We can see two modes of carbon market governance emerging. First, continuing and stringent state authority is proposed to limit price volatility, and thus speculation, banking and the creative creation of new financial products; to monitor, control and verify environmental additionality; to prevent corruption (as happened in the European Trading System early 2011); to give out and reduce carbon allowances; to set boundaries to offsets *vis-à-vis* domestic reductions; and so on. But there might be future limitations to such government-dominated authority structure, as these carbon markets are deterritorializing and globalizing and continue – even shortly after the 2008/09 financial crisis – to face deregulatory pressure. Political and state authority of carbon markets is vulnerable to lobbying of major interest groups, who have differences in power and access to the public authority structures that (design and set rules to) govern carbon markets. A second, different and predominantly private authority structure to govern carbon markets is focused on reputation, verification, accountability, and certification of products. The current development of certifications fits in this strategy, where subprime carbon can be distinguished from (for example) gold standard carbon, in order to prevent firms seeing suddenly their reputation being jeopardized when using carbon credits with no relations to real CO₂ emission reductions. Certification systems, which entail a combination of market and moral authority, bring trust in deterritorialized networks that exchange carbon credits. Such certified carbon products have a higher price on markets by securing environmental additionality and rationality; Bloomberg/Ecosystem Marketplace⁵⁸ noted average prices ranging from 15.2 (CDM/JI) to 0.8 (CCX) US\$/tCO₂ for different certification standards in the voluntary market in 2009. But such “private regulation and authority” only works when carbon markets and market actors are transparent; when verification, certification and rating systems are themselves governed (as we learned from the rating systems in the financial market); and when all is closely and powerfully followed, watched and co-constructed by independent (public and private) environmental advocates.⁵⁹

⁵⁸ Bloomberg/Ecosystem Marketplace 2010, 69.

⁵⁹ Some of these standards involve NGOs as a way to increase the reliability and transparency of the certification system, such as the Gold standards – supported by 60 NGOs – and the climate, community, and biodiversity standards.

So, we can identify multiple environmental authority structures at work. But these different environmental authorities are activated in two distinct networks, and it is of key importance for carbon markets in which network decision-making power and governability will be concentrated. Will it be in the global financial networks of banks, investors, hedge funds, traders, ministries of finance, and international financial institutions, or in the networks of (supra)national environmental authorities, environmental movement organizations, private environmental verification and certification institutions, the CDM Executive Board, and the like? Which network will be able to “program” the carbon market and design and implement the environmental versus the financial codes? Hence, the environmental success of a global carbon market is less a matter of complexity, but more of the kind and outlook of the global networks that are able to govern the content, direction, speed and pattern of global flows of money, emission credits, offsets, finances and information; and thus in the end also greenhouse gas emissions. In such new networked governance constellations, states are no longer the only – and some would argue not even the main – governing actors with authority. In understanding carbon market governance and the future of these markets one should not concentrate on nation states, but rather on how (and what kind of) networks will have and use the authority to determine carbon flows and their related environmental profile. Securing environmental additionality and rationality and preventing carbon markets from becoming primarily financial markets is thus a matter of networks and flows and less of states and societies.

Epilogue

With these two examples of environmental governance we aimed to illustrate that applying a network and flow perspective can be rewarding when it comes to understanding current, globalizing forms of politics, authority, and governance. Of course, the examples of biofuels and carbon markets are far from representative for the variety of environmental challenges the current world faces. Not all environmental challenges are that much global and mobile in character, and hence the applicability and usefulness of this new network and flows perspective will not be self-evident everywhere and in all cases. The empirical cases under study will determine whether and to what extent this network and flows perspective can serve as a fruitful complement or replacement of the more conventional perspectives on international governance and international relations.

In addition, the perspective of global environmental politics and governance as presented here draws upon a variety of interpretations of networks, flows, or mobilities which are still heavily debated in (environmental) sociology today. We are aware of the (conceptual) issues which come to the fore and still have to be resolved⁶⁰ when applying such a more general, social science-based mobility perspective to questions of environmental politics and governance. What the network and flow perspective does bring us, however – as we hope to have shown in our case studies on the governance of global biofuel and emerging carbon markets, respectively – is a new and better understanding of the huge and multifaceted influence of globalization on the policies and authorities involved in governing the environment.

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⁶⁰ Spaargaren et al. 2006; see also Rau 2010.

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16 Global multilevel governance and the management of hazardous chemicals

Henrik Selin

Global governance studies represent a shift in international relations scholarship away from a traditional, single focus on unitary nation states often too narrow to capture important political drivers and processes, to the inclusion of a much larger set of issues, actors, forums, and structures.¹ Furthermore, as state and nonstate actors interact and expand political agendas, scholars and practitioners have become interested in multilevel governance – a multitude of public and private sector actors operating across horizontal and vertical levels of social organization and jurisdictional authority shaping policy-making and outcomes. In global politics, states, intergovernmental organizations (IGOs), and nongovernmental organizations (NGOs) cooperate in an increasing number of international forums as they influence governance efforts across spatial, temporal, and social organizational scales in a wide range of policy areas. Much global multilevel governance focuses on the environment and human health where leading actors often express diverse – and sometimes conflicting – opinions of what constitutes “good” governance and how such governance should be organized.

A major area of global environmental politics where states, IGOs, and NGOs engage in efforts on multilevel policy-making concerns problems caused by hazardous chemicals. At the 2002 World Summit on Sustainable Development (WSSD), governments set the goal that chemicals should be “used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment” no later than the year 2020. Governments also recognized the need to “prevent and minimize waste and maximize reuse, recycling and use of environmentally friendly alternative materials.”² The Strategic Approach to International Chemicals Management (SAICM), adopted in 2006, guides collaboration by public and private sector actors toward these goals. Although there has been some improvement of environmental and human health protection, better multilevel management of hazardous chemicals remains a major sustainable development issue. Importantly, politics, policy-making, and implementation in this area are influenced by a multitude of institutional linkages.

The global chemicals regime is institutionally fragmented. Its core consists of several formally independent treaties that have been developed primarily since the 1980s. These treaties are not organized under an overarching framework convention common in other environmental issue areas. However, even if the major chemicals treaties are freestanding, their creation and implementation are cognitively and practically connected. Cognitively, states, IGOs, and NGOs perceive many of the major treaty issues to be closely connected. They act and formulate policy responses and management efforts based on these conceptual linkages. In practice, states, IGOs, and NGOs realize that many policy and management outcomes are linked with actions and decisions across forums, as developments under one instrument shape debates and actions also in other policy venues. Therefore, improved environmental and human health protection

¹ Biermann and Pattberg 2008; Biermann and Siebenhüner 2009; and Selin 2010.

² WSSD 2002, paragraphs 22 and 23.

requires better multilevel governance, including coordinated policy-making and harmonized implementation across the major treaties. This is also a core objective of SAICM.

Building on existing work, there is a need for further theorizing around global multilevel governance and institutional linkages, coupled with more empirical data collection. This chapter uses information and examples from the global chemicals regime – a relatively little studied but important area of international environmental politics – to examine some broader governance and linkages issues.³ The next section provides a short introduction to the global chemicals regime and its main institutional components. This is followed by a brief discussion of global multilevel governance, highlighting the importance of institutional linkages operating horizontally and vertically across governance scales and forums. From a global multilevel governance point of view, the next section takes an actor-focused perspective as it examines issues of coalition formation, policy diffusion and linkage politics, discussing ways in which these create as well as are shaped by institutional linkages. The chapter ends with a few remarks on areas where there are room for continued research and analysis.

The Global Chemicals Regime

Early international cooperation around hazardous substances dates back to the nineteenth century, but states, IGOs, and NGOs did not begin to expand the chemicals regime based on a more comprehensive concern about environmental and human health issues until the 1960s. Important debates under the chemicals regime concern how to design and fund multilevel governance systems and how to regulate specific substances and manage risks under conditions of scientific uncertainty. The foundation of the chemicals regime consists of three global treaties – the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, and the Stockholm Convention on Persistent Organic Pollutants (POPs) – and one regional treaty – the Protocol on Persistent Organic Pollutants to the Convention on Long-Range Transboundary Air Pollution (CLRTAP) (see Table 16.1).

The 1989 Basel Convention regulates the transboundary movement and environmentally sound disposal of hazardous wastes, including many hazardous chemicals, as well as stresses the importance of waste minimization. It prohibits the export of hazardous wastes to Antarctica and to parties that have taken domestic measures to ban imports. Permitted waste transfers from one party to another are subject to prior informed consent (PIC) where the importing party must approve a shipment before it can be sent from the exporting party. Exports to non-parties must be subject to an equally stringent agreement. Trade regulations have been strengthened over time with a focus on trade between industrialized and developing countries and parties have also negotiated rules for liability and compensation. Parties have further developed guidelines for the management of particular waste streams, including electronic wastes. In addition, parties have approved 14 Basel Convention regional centers located in different parts of Latin and South America, Africa, Asia, and Europe to aid treaty implementation through capacity building.

The 1998 Rotterdam Convention controls the international trade in commercial industrial chemicals and pesticides, based on an earlier, voluntary mechanism. The Rotterdam Convention, which institutes a legally binding PIC mechanism similar to the one operating under the Basel

³ This chapter draws on empirical data, arguments and analysis presented in Selin 2010.

Table 16.1 Summary of the four main treaties on chemicals management

Treaty	Main points
Basel Convention: Adopted in 1989; Entry into force in 1992; 175 Parties as of 2011	Regulates the transboundary movement and disposal of hazardous wastes; covers chemicals if they fall under the treaty's definition of hazardous wastes Hazardous waste transfers are subject to a PIC procedure where a party must give explicit consent before a shipment can take place Exports of hazardous wastes are prohibited to Antarctica and to parties that have taken domestic measures banning imports Exports of hazardous wastes to non-parties must be subject to an agreement at least as stringent as the Basel Convention The 1995 Ban Amendment (not yet in force) bans export of hazardous wastes from parties that are members of the OECD or the EU, as well as Liechtenstein, to other parties The 1999 Protocol on Liability and Compensation (not yet in force) identifies financial responsibilities in cases of waste transfer accidents Basel Convention regional centers address management and capacity-building issues
Rotterdam Convention: Adopted in 1998; Entry into force in 2004; 140 Parties as of 2011	Regulates the international trade in commercial chemicals using a PIC scheme 43 chemicals were covered by 2011 An exporting party must receive prior consent from an importing party before the export of a regulated chemical can take place Parties are obligated to notify the Secretariat when they ban or severely restrict a chemical Contains a mechanism for evaluating and regulating additional chemicals under the treaty
CLRTAP POPs Protocol: Adopted in 1998; Entry into force in 2003; 30 Parties as of 2011	Regulates the production and use of POPs pesticides and industrial chemicals listed in the treaty Outlines provisions regarding the environmentally sound transport and disposal of POPs pesticides and industrial chemicals, consistent with the Basel Convention Sets technical standards for controlling emissions of unintentionally produced byproduct POPs 25 chemicals were regulated by 2011 Contains a mechanism for evaluating and regulating additional chemicals under the treaty
Stockholm Convention: Adopted in 2001; Entry into force in 2004; 172 Parties as of 2011	Regulates the production, use, trade and disposal of POPs pesticides and industrial chemicals listed under the treaty Sets technical standards for controlling the release of byproduct POPs listed under the treaty Parties are required to ban the import or export of controlled POPs except for purposes of environmentally sound disposal Contains a mechanism for evaluating and regulating additional chemicals under the treaty 22 chemicals were regulated by 2011 Stockholm Convention regional centers support capacity-building and technology transfer

Convention, is designed principally to assist developing countries in deciding whether to permit the import of a hazardous chemical. A party can respond in three different ways after having received a formal request to accept import of a chemical on the convention PIC list. First, it can declare that it consents to the import and any other shipments within the same calendar year; second, it may reject the request; or third, it may consent to import, but only if specific conditions are met by the exporting party. Parties are obligated to notify the Secretariat when they ban or severely restrict a chemical so that information may be made available to other parties. The Rotterdam Convention also includes a mechanism for the evaluation and possible inclusion of additional chemicals; by 2011, the treaty covered 43 chemicals.

The 2001 Stockholm Convention targets POPs as a category of particularly toxic and persistent chemicals that remain in the environment for long periods of time. It divides POPs into three annexes. The production and use of pesticides and industrial chemicals listed in Annex A are generally prohibited, but parties may apply for country-specific and time-limited exemptions. Annex B lists pesticides and industrial chemicals subject to restrictions where only specified uses are allowed for all parties. Annex C lists byproducts regulated through best-available techniques and best environmental practices. Import and export are only permitted for substances subject to use exemptions or for the environmentally sound management and disposal of discarded chemicals. The Stockholm Convention also includes a mechanism for the evaluation and possible inclusion of additional substances; by 2011, the treaty covered 22 POPs. Furthermore, parties have established 15 Stockholm Convention regional centers located in Latin and South America, Africa, Asia, and Europe to work on capacity building and technology transfer.

The 1998 CLRTAP POPs Protocol was negotiated under the auspices of the United Nations Economic Commission for Europe, which comprises North America and Europe as far east as Russia and Kazakhstan. This was the first ever POPs-specific agreement (but many older agreements cover some of the same substances). The CLRTAP POPs Protocol divides regulated chemicals into three annexes. Annex I lists pesticides and industrial chemicals whose production and use are banned. Annex II contains pesticides and industrial chemicals for which some specified uses are permitted. Annex III lists byproducts controlled through the application of best-available techniques and best environmental practices for reducing emissions. The CLRTAP POPs Protocol also mandates the environmentally sound transport and disposal of POPs. Similar to the Stockholm Convention, the CLRTAP POPs Protocol has an associated mechanism for evaluating additional chemicals for possible controls; by 2011, 25 chemicals were subject to regulations.

In addition to the four multilateral agreements discussed above, there are a large number of other treaties that also address hazardous chemicals in a multitude of ways. Many of these are designed to protect shared seas and lakes against chemical pollution and dumping, controlling many of the same chemicals as the four main treaties. Under the Regional Seas Programme, the United Nations Environment Programme (UNEP) has been instrumental in developing 13 action plans targeting a long list of pollutants, involving over 140 countries. In addition to these UNEP-led actions, regional agreements covering, for example, the Northeast Atlantic, the Baltic Sea, and the North American Great Lakes contain regulations and set technical standards on a wide range of hazardous chemicals. Also, a growing number of treaties covering transboundary rivers all over the world contain pollution-prevention measures. In addition, countries in several regions have created separate hazardous waste management agreements covering toxic chemicals. As a result of all of these global and regional agreements and activities, the chemicals regime is institutionally very complex.

Global Multilevel Governance and Institutional Linkages

The design of effective global multilevel governance is a critical challenge across a wide range of international issue areas. That is, the successful governance of many important policy issues requires supportive policy-making and implementation across global, regional, national, and local governance scales. Much early theoretical and analytical interest in multilevel governance starting in the 1990s came out of European Union studies, but scholars have expanded multilevel governance studies into other regions as well as global politics and policy-making.⁴ In a multilevel governance system, political actors interact within and across formally independent but functionally interdependent forums and jurisdictions located at different governance scales. The study of multilevel governance also draws attention to the importance of institutional linkages where institutions are broadly defined as interrelated sets of rules and practices that prescribe behavior, constrain activity, and shape expectations.⁵

Much global environmental governance is shaped by institutional linkages operating horizontally and vertically across geographical scales and jurisdictions.⁶ Horizontal linkages exist between forums and instruments at similar levels of social organization, such as connections between two or more global chemicals treaties and their associated bodies such as secretariats and chemical review committees. Vertical linkages exist between instruments and management activities at different levels of social organization. This includes connections among global, regional, national, and local regulations of hazardous chemicals and wastes as well as the use of regional centers under the Basel and Stockholm Conventions to support treaty effectiveness and capacity building. At the same time, public and private sector actors seek to upload specific standards and ideas to policy-making forums at higher levels of authority, as these actors are required to meet commitments and obligations under multilateral treaties. All these kinds of linkages influence regime policy-making and implementation.

Institutional horizontal and vertical linkages come in the form of governance and actor linkages.⁷ The increasing number and scope of institutions create a growth in both these types of linkages. Governance linkages refer to structural connections between nonmaterial components of particular institutions. They exist when principles, norms, rules, and decisions in one forum affect activities and outcomes in another. Actor linkages are agent-based linkages across institutions and forums. It is important for analytical purposes to make a fundamental distinction between structural governance linkages that guide the behavior of actors who possess no independent ability to act, and of actor linkages consisting of agents who have the ability to act independently and are the ones that make decisions and drive policy developments, including those creating connections across institutions.⁸ As many of the same actors collaborate in multiple forums, there are great overlaps in the parties, observers, and other stakeholders who interact under different chemicals treaties, programs, and management efforts.

Institutional linkages may have different consequences for decision-making processes and outcomes across policy forums. In cases of synergy, formally separate policy instruments and management efforts addressing related issues are mutually supportive and reinforcing.

⁴ Marks 1992; Selin and VanDeveer 2009; and Enderlein et al. 2010.

⁵ Oberthür and Gehring (2006) identify a number of similar terms in the literature denoting instances of one instrument influencing another, including linkage, interplay, interlinkage, overlap, and interconnection.

⁶ Young 2002; Selin and VanDeveer 2003, 2011; Raustiala and Victor 2004; Oberthür and Gehring 2006; Alter and Meunier 2009; Selin 2010; and Keohane and Victor 2011.

⁷ Selin and VanDeveer, 2003, 2011.

⁸ Young et al. 2008; Biermann and Siebenhüner 2009; and Selin 2010.

Furthermore, synergy is often defined as enhancing effectiveness and governance. The outcome in a synergetic situation is more than the mere sum of the different parts; value is added so that the total result is greater than what could have been achieved by each piece working separately. In contrast, conflict arises when the objectives and/or operation of two or more policy instruments or management efforts contradict each other, hampering problem solving. In addition, there may be competition between policy venues. Then, policy developments in one forum can act as an incentive for expanded policy-making in another forum to not fall behind the first forum. However, such competition may enhance the political and practical importance of one forum at the expense of another; competition may not be equally beneficial to multiple forums.

In studying institutionally dense issue areas, Rothstein proposes that the more a policy issue is spread across different governance scales and jurisdictions and involves multiple sets of stakeholders, the higher the likelihood of the development of conflicting regulatory cultures and policy outcomes across the various policy venues.⁹ Brown Weiss also calls attention to “treaty congestion” issues in policy areas where there are intersecting agreements.¹⁰ However, when Oberthür and Gehring compared instances of synergetic and disruptive interactions across related legal instruments, they found that governance among their cases was more likely to be enhanced than impeded by linkages.¹¹ Nevertheless, as governance and actor linkages within and across governance scales create new needs for collaborative problem solving, policy-makers are exploring ways to harness regulatory synergies.¹² Participants in the chemicals regime have taken several political and administrative measures to enhance legal and regulatory consistency across treaties.

Treaty implementation requires national governments possessing a wide range of public policy-related capacities, including enforcement of regulatory standards (production processes and emission standards), market controls (use of industrial chemicals and pesticides, handling of wastes), and monitoring and reporting (submitting national reports to secretariats). Many UN organizations are engaged in related capacity-building activities. So are treaty-specific bodies. For example, secretariats may: provide advice on international legal obligations and rights; assist parties in the development of technical guidelines for the environmentally sound management of POPs and hazardous wastes; and organize awareness raising and technical workshops. The Basel Convention and Stockholm Convention regional centers assist parties in strengthening their capacity in specific treaty-relevant areas, as well as promoting technology transfer. This is not restricted to national governments, but may involve activities that link the public sector, the private market, and civil society.

Institutional Linkages and Actor Behavior

As there is a need in the global environmental politics literature for more in-depth theory development and analysis around global multilevel governance, there is a growing body of scholarly work addressing different aspects of this complex and multifaceted issue. Much of the existing work is structurally focused, but some more recent studies have also focused on the role of actors in creating and maintaining linkages as well as how their behavior and interests are shaped by linkages.¹³ Nevertheless, more actor-focused research is warranted. In the context

⁹ Rothstein 2003.

¹⁰ Brown Weiss 1993, 679.

¹¹ Oberthür and Gehring 2006.

¹² Chambers 2008.

¹³ Biermann and Siebenhüner 2009; and Selin 2010.

of global multilevel governance in the area of chemicals management, it is clear that institutional density shape policy-making and actor behavior across forums in several significant ways. This section draws attention to a few important political aspects and implications of institutional linkages, as they play out under the chemicals regime: coalition formation, policy diffusion, and linkage politics.

Coalition Formation

Since the 1960s, the international community has been engaged in a huge expansion of global environmental policy-making and standard setting. As part of this broader trend, coalitions of states, IGOs, and NGOs have played many influential roles in the creation and expansion of the global chemicals regime. However, the same group of regime participants has not consistently been the driving force behind the many policy and management developments on hazardous chemicals. Instead, different actor coalitions have emerged around specific sets of issues that members have prioritized and promoted. These coalitions of regime participants have been formed around shared beliefs and interests, which are sometimes shaped by actor and governance linkages across institutions. However, interests and compositions of coalitions may change over time, and there are different coalitions for different policy issues. Furthermore, these coalitions are informal rather than structured around any kind of formalized membership.

Coalition formation under the chemicals regime is facilitated by the fact that representatives of many states regularly make personal and professional connections through their participation in multiple policy forums. Almost all of the world's states and a multitude of IGOs and NGO collaborate in a wide range of chemicals forums. These repeated interactions in multiple venues and over long periods of time influence the views of regime participants with respect to specific chemicals issues as well as their policy preferences. Because many of the different global and regional chemicals treaties address policy issues that are often very similar, including their coverage of overlapping sets of substances, it is common that the same state representatives meet and discuss related policy issues under multiple treaties. Sometimes such interactions also lead to professional and personal connections and the exchange of ideas and knowledge upon which common interests and policy positions may be formed.

Typically, not all regime participants are equally active or influential in shaping policy-making and outcomes. It is well recognized that leadership by coalitions or individual states, IGOs, and NGOs can be critical in regime development.¹⁴ Leadership can be exercised in different forms. Under the chemicals regime, coalitions have demonstrated both intellectual and structural leadership. An intellectual leader relies on the power of ideas, norms, and knowledge to shape the way other participants involved in regime formation perceive issues and conceptualize policy alternatives. Intellectual leaders often seek the adoption of particular policies by trying to secure broad assimilation and acceptance of new ideas, norms, and knowledge. Structural leadership is exercised through the commitment of financial, technical, and scientific resources necessary for environmental assessment and policy-making with the intent of shaping agendas and policy outcomes. Of course, intellectual and structural leadership can be combined, and coalitions have often done so in the expansion of chemicals policy.

The fact that there are parallel and related discussions on major chemical policy issues going on in multiple forums – including principles for international cooperation and regulation, controls of specific chemicals, and the development of mechanisms for monitoring, compliance,

¹⁴ Young 1991a, 1991b; Underdal 1994; Selin and VanDeveer 2003, 2011; and Skodvin and Andresen 2006.

financial assistance, and capacity building – means that coalition members must pay simultaneous attention to all of these. Importantly, it also means that regime participants must consider how one debate or decision may shape others. That is, a policy decision in one forum can have significant influence on how a similar issue is addressed in another forum. The development of the chemicals regime demonstrates how the occurrence of parallel policy debates in two or more forums can open up multiple avenues for advocacy and policy change. In fact, cross-venue coalitions are sometimes formed when a policy issue is blocked or moving slowly in one venue and coalition members are looking to find alternative routes for forwarding their interests.

For example, a coalition of UNEP, African and Nordic countries, Greenpeace and the Basel Action Network demonstrated much intellectual and structural leadership as they pushed early policy developments in the 1980s and 1990s on the trade in hazardous wastes and chemicals. Believing that trade controls were needed to help developing countries reduce domestic problems, they attempted to forward their cause by linking policy debates and developments on wastes and chemicals in different forums and under separate policy instruments. Yet, they failed to achieve a complete or partial trade ban in the face of strong opposition from a coalition of most industrialized countries and industry organizations, instead settling for first voluntary and then mandatory PIC schemes. The anti-ban coalition also recognized the importance of institutional linkages; they realized that the settling of the trade issue on either chemicals or wastes would have important ramifications for the management of the other. This made them reluctant to compromise in either forum.

In another example of how coalition formation and actions across forums can be important in regime development, a small coalition of Northern industrialized countries and advocacy groups including representatives of Arctic indigenous peoples took on early intellectual and structural leadership roles on POPs. These actions were driven by a common interest to reduce long-range transport of emissions. Coalition members advocated for regional and global policy expansions in combination with a readiness to host and finance international political and scientific meetings, initiate and sponsor environmental assessments, and fund national experts in international organizations preparing background documents and policy proposals. This was critical for building a coalition strong enough for generating necessary political support for the creation of both the CLRTAP POPs Protocol and the Stockholm Convention. Coalition members also used decisions under CLRTAP to shape subsequent policy-making under the Stockholm Convention.

Policy Diffusion and Linkage Politics

Many of the policy expansions under the chemicals regime since at least the 1980s have been the result of coalitions of regime participants diffusing ideas, knowledge, and policy proposals across forums. Coalition building and actions to promote specific policy developments are influenced by actor and governance linkages, which shape regime participants' interests. These linkages raise political stakes in that the effects of a policy decision are not confined to one forum, but may also have important consequences for decision-making in other forums. Policy diffusion efforts are shaped by institutional linkages in several ways. The fact that there are so many actor and governance linkages may have both positive and negative consequences for policy-making and management. That is, actor and governance linkages may both facilitate and hinder political agreement as actor coalitions interact and engage in linkage politics – the strategic use of institutional linkages to shape policy processes and achieve desired outcomes.

Sometimes policy diffusion efforts are aided by the fact that regime participants share a basic interest in harmonizing principles, norms, and rules across treaties so that they are not faced with conflicting or contradictory commitments. This would make it harder for parties to fulfill their obligations as well as impede treaty implementation and weaken regime effectiveness. Aiding harmonization and capturing synergies was a major issue behind the development of SAICM, and can also be seen with respect to the actions by parties to the CLRTAP POPs Protocol and the Stockholm Convention to ensure that chemicals covered by both treaties are subject to compatible regulations. Similarly, parties and observers to the Basel Convention are mindful of policy developments on wastes under the Stockholm Conventions as they develop technical guidelines for the disposal of POP wastes. Governments also work on harmonizing national reporting requirements and formats under all major chemicals treaties.

Many cases of linkage politics and policy harmonization under the chemicals regime involve science–policy interplay, including linkages across forums. For example, POPs assessment data generated under CLRTAP played an important part in the selection of the original 12 chemicals covered by the Stockholm Convention as well as the preparatory work preceding the treaty negotiations. Similarly, much of the work on establishing screening criteria for assessing additional POPs was diffused from CLRTAP to the global negotiations, resulting in very similar assessment criteria under the two POPs treaties even if they were negotiated independently at different times. Successful assessments and transfer of assessment data across forums is not only dependent on the scientific credibility of the assessment reports, but also their policy salience and political legitimacy.¹⁵ It is often harder to ensure the acceptance and appropriate use of scientific assessments in diverse stakeholder groups and multiple forums, but the POPs case demonstrates that it is possible in at least some instances.

Even as the recognition and use of institutional linkages may aid governance, experiences under the chemicals regime also demonstrate that relationships between different coalitions interacting across forums can be contentious, as different coalitions express diverging views and support opposing policy outcomes. The existence of governance and actor linkages does not guarantee smooth policy expansions. Political disagreement in one forum sometimes spill over into others, hindering policy diffusion and decision-making. For example, this was visible in the lengthy debates between opposing coalitions around the mandate and operation of chemical review committees under the Rotterdam and Stockholm Conventions. On these issues, linkages between the parallel discussions raised the political stakes of the debates. All regime participants realized that a decision under one of the treaties would have direct implications for how the issue was settled under the other treaty; this led to protracted conflicts across policy venues. Not surprisingly, the final compromise was also very similar under both treaties.

Other examples of controversies diffused from one policy forum can be found in the debates regarding the establishment of more comprehensive mechanisms on monitoring, compliance, and capacity building. These discussions are carried out separately under each treaty as their legal bases are found in the specific language of each of the four treaties. Yet, the debates are linked as parties recognize that an agreement under one treaty will shape debates and outcomes elsewhere. This has made parties hesitant to compromise in one forum as they know that would have ramifications for how their interests may or may not be met under other treaties. Efforts by a coalition to diffuse specific policy ideas and assessment data from one forum may also be compounded by differences in membership. For example, the transfer of POPs assessments

¹⁵ Mitchell et al. 2006.

and regulations from CLRTAP to the global process was complicated by the fact that most countries involved in the global efforts had not been involved in the regional work.

An important aspect of linkage politics is that actors may strategically engage in forum shopping and scale shopping as they seek to advance their interests on multiple fronts and finding the most supportive arena for policy expansion.¹⁶ Forum shopping occurs when policy advocates actively explore different options to find a forum that is particularly receptive to their concerns, as well as strategically use one forum to influence debates and decisions in a related forum. This can be combined with scale shopping as regime participants sometimes seek to geographically scale up or down where an issue is addressed because they see strategic or practical benefits of (at least temporarily) dealing with an issue at one governance level over another. Such forum and scale shopping often involve the exercise of intellectual and structural leadership as well as science–policy linkages. All of these issues are visible, for example, in the negotiations of the CLRTAP POPs Protocol and the Stockholm Convention as well as the continued assessment and regulation of additional chemicals under the two POPs agreements.

Continued Research and Analysis

In global environmental politics scholarship, the chemicals regime has attracted relatively little interest (compared with other issue areas such as climate change and biodiversity). As better chemicals management remains a global sustainable development challenge, it is an area worthy of much more attention. Furthermore, the chemicals regime may offer important lessons for other policy areas with respect to policy implications of actor and governance linkages and efforts to enhance multilevel governance. As there is a growth in vertical and horizontal linkages within and across issue areas, increased institutional density affects the interests and strategies of policy actors. Regime participants operating in situations of a high degree of institutional linkages will not only think about how to forward their interests with respect to a particular policy issue within one forum, but also engage in linkage politics as they consider how choices they make in one forum will influence their interests and policy outcomes in other arenas. This, in turn, impacts regime creation and implementation.

It is important to recognize that institutional linkages can have both positive and negative implications for problem solving. In some cases, governance and actor linkages can facilitate policy diffusion and harmonization, which may allow regime participants to capture important regulatory and management synergies. However, coalitions of regime participants may also act in ways that hinder policy developments in response to linkages between policy forums. Such an impasse may be difficult to break as policy issues are linked across multiple forums, raising political stakes. An increase in institutional linkages also increases the political and organizational need to better link management efforts across global, regional, national, and local governance scales. It is only through more integrated multilevel governance that many problems with hazardous chemicals can be effectively addressed. Many other international environmental issue areas share similar multilevel traits, and participants in these may be well advised to learn from multilevel management and capacity-building efforts under the chemicals regime.

There has been a great increase in global environmental governance studies over the past three decades.¹⁷ There is, however, still room for more theorizing and analysis grounded in

¹⁶ Selin and VanDeveer 2003, 2011; Raustiala and Victor 2004; Gupta 2008; Young 2008; and Keohane and Victor 2011.

¹⁷ Biermann and Pattberg 2008.

empirical research. This is important for both academic and policy-oriented reasons. Academically, there should be further study into issues of coalition formation, policy diffusion, and linkage politics, and how they and other issues may influence actor behavior and treaty development. This is required to better understand global environmental politics as well as an important part of regime effectiveness. There is also a need for more policy-oriented work. Many critical environmental and sustainable development issues are far from addressed. The ability to make more progress is at least partially influenced by multilevel governance structures. Participants in many issue areas face important design issues and choices. Policy-focused research into the ways in which decision-making and management activities are carried out across forums and scales can be of high relevance to content and structure of future governance.

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17 Governing climate change: the challenge of mitigating *and* adapting in a warming world

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In international climate politics, the world has moved from an era in which the dominant policy problem was how to reduce emissions (“mitigation”), to one where this concern has been joined by another of increasing urgency: how to adapt in the face of the growing impacts of climate change (“adaptation”). The shift in emphasis has accelerated since the failure, in late 2009, of the Copenhagen conference to produce a stronger international mitigation regime, and growing evidence that the chances of staying within 2°C of warming (the widely assumed threshold of dangerous change) are rapidly diminishing. It has led to calls for new policy portfolios that do not simply mitigate to achieve 2°C, but also facilitate adaptation to potentially greater levels of warming – such as 3 and even 4°C.²

The development of policy on any problem requires choices to be made; choices which in turn constantly provoke governance *dilemmas*, which systems of governance have been established to handle.³ These choices and dilemmas are especially problematic in relation to a “wicked” problem such as climate change, where few self-evident or easily implemented “best” options exist. Among the key choices are, first and foremost, the question of how climate change should be framed and corresponding objectives set, in order for effective action to be galvanized. Second, at what level (or scale) of governance should policies for mitigation and adaptation be developed? Depending on the nature of “the problem,” a centrally set or more locally based approach may be necessary. Third, through what modes of governing – markets, networks or hierarchies – and their associated policy instruments should policy-makers act? Fourth, given different levels of wealth and perceived responsibility for climate problems, who should pay the costs and who reap the benefits of action – or inaction? The interrelatedness between choices is also important to note. For example, the manner in which a particular problem is framed tends to influence the choice of policy instrument, the level at which action is considered most appropriate and who should do most to respond.

This framework provides a useful analytical device for understanding past and future challenges of climate policy. This chapter explores how the choices and dilemmas have manifested themselves and been addressed in the past, and how they might present themselves in a new era, when action is increasingly being demanded on *both* mitigation and adaptation. It does this for one particular system of governance, widely perceived as holding a leading position in relation to the environment and climate change: the European Union (EU).⁴ The EU provides a particularly interesting (ongoing) test of the ability of governors to coordinate mitigation and adaptation policies in an innovative manner. Indeed, if the EU is seen to struggle

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² New et al. 2009; and Stafford Smith et al. 2011.

³ Haug et al. 2010.

⁴ Jordan et al. 2010.

in this endeavor, it might be concluded that the prospects for other governance systems, where administrative capacities are weaker and the levels of political support are lower, are particularly bleak.

One should of course be wary of generalizing too much from such a specific and arguably unique system of multilevel governance, the particular characteristics of which have shaped its handling of key choices and dilemmas.⁵ Historically, it has prioritized the reduction of barriers to trade between its members to create a single market, and often rationalized EU-level environmental policy in such terms. It has also sought to reduce economic disparities in the interests of internal “cohesion” and “solidarity.” Its scope for action has been constrained, however, by national concerns over “subsidiarity,” which restrict policy-making in some key areas, including taxation and land-use planning.⁶

Nonetheless, EU policy-makers are now pursuing greater levels of ambition in both mitigation and adaptation policies, boldly declaring that *both* concerns should be “mainstreamed,” or integrated, into all policy sectors.⁷ Whether or not they fully appreciate the governance challenges associated with such an endeavor is something that we shall address in this chapter. Because of space constraints, we concentrate rather more on the internal political workings of the EU than on its international diplomatic actions (of which we have provided fuller analysis elsewhere).⁸

The remainder of this chapter unfolds as follows. In the next section we elaborate on some of the key choices and dilemmas associated with climate governance. Using this as a heuristic, the following section outlines the EU’s actions in terms of the mitigation-oriented problem framing that dominated policy up until the 2000s, and notes how adaptation began to be constructed as a policy problem, particularly after 2005. The penultimate section highlights how new dilemmas could emerge, particularly in the decade ahead, when efforts are made simultaneously to mitigate *and* adapt. The final section concludes and looks at immediate prospects for innovative and coordinated policy in the EU.

The Dilemmas of Climate Governance

What is “The Problem”?

Which fundamental aspects of the policy problem should be tackled and in what order of priority? Should solutions be promoted that simultaneously address a range of problems, delivering “co-benefits” in addition to climate protection? In which sectors should solutions primarily be sought? In framing a problem in one way, will opportunities presented by other possible policy approaches be lost? These are the choices and dilemmas that policy-makers are faced with in defining problems and setting corresponding objectives.

Since the 1980s, mitigation and adaptation have constituted the two key – and largely distinct – problem framings. In the terminology of the Intergovernmental Panel on Climate Change (IPCC), mitigation refers to an “anthropogenic intervention to reduce the sources or enhance the sinks of greenhouse gases,” while adaptation refers to an “[a]djustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.”⁹

⁵ Jordan et al. 2012.

⁶ Jordan et al. 2010.

⁷ Barosso 2009.

⁸ Jordan et al. 2010.

⁹ Klein et al. 2007, 750.

Mitigation is commonly presented as requiring long-term-oriented action with global benefits. Since global climate stability constitutes a public good, its protection entails significant collective action problems. Adaptation, on the other hand, is often seen as delivering more localized benefits, and therefore as requiring actions at a correspondingly more local level. These actions, however, may need to be stimulated and coordinated by policy interventions from higher governance levels.¹⁰ Compared to mitigation, which is relatively easy to monitor and evaluate, the success of adaptation is far less easy to define, predict and measure, and consensus even on basic concepts remains frustratingly elusive.¹¹ In responding to the adaptation “problem,” a broad distinction has been made between predicting and dealing with specific impacts and considering how to reduce vulnerability in general.¹²

Until very recently, by treating mitigation and adaptation as essentially different ways of viewing and responding to the same problem, possible synergies and trade-offs between policies have been neglected. Crucially, this duality has been reproduced in two essentially disconnected governance frameworks.¹³ Although the United Nations Framework Convention on Climate Change (UNFCCC) has called for action on both mitigation and adaptation from 1992, it was only after the US withdrawal from the Kyoto process in 2001 that international attention began to turn more seriously to the latter.¹⁴ Numerous commentators have identified a “taboo” regarding serious international discussion of adaptation, arising partly out of concern that it could imperil attempts to address the climate problem through mitigation, and partly because of an implicit link with discussions on liability and compensation for damage, which industrialized countries have wanted to avoid.¹⁵

Which Level of Governance to Act At?

This policy choice relates to the level of governance at which to act, the extent to which policy responses should be coordinated centrally, and whether to act in advance of more global-level agreement. In terms of deciding the level at which to act, the most obvious choice is between acting locally in a decentralized way, guided by the principle of subsidiarity, or at higher levels – nationally, regionally or internationally. In practice, there may be more legal competence to act at some levels than others, or the interconnected and cross-scale nature of climate change may call for simultaneous (but different) interventions at many different levels, that is, multilevel governance.

In Europe, the issues relate to the extent to which EU policy-makers should seek to harmonize the type and degree of effort made to deal with policy problems, or allow national differences to persist. From a global perspective, a key question is whether the EU should act in advance of the establishment of binding multilateral frameworks, potentially provoking the relocation of industry to less regulated jurisdictions.

Which Modes and Instruments to Use?

Which modes and/or specific instruments of governance should policy-makers use? To what extent should they constrain actors (as in hierarchical modes), seek to incentivize them (as in

¹⁰ Stafford Smith et al. 2011.

¹¹ Smit and Wandel 2006.

¹² See, for example, Dessai and Hulme 2004.

¹³ See, for example, Klein et al. 2007; and Biesbroek et al. 2009.

¹⁴ Schipper 2006.

¹⁵ Schipper 2006; and Pielke et al. 2007.

market modes) or build trust between them (as in network modes?).¹⁶ Some instruments may be regarded as hybrid solutions to the choice: emissions trading for example, involves elements of hierarchy (in the setting of a “cap”) and market-based mechanism (in the financial incentive the system creates for mitigation). In adaptation policy, compulsory insurance could be regarded a mix of hierarchical and market-based modes.

Who Bears the Costs and Who Enjoys the Benefits?

Although distributional aspects are often opaque, in the interests of legitimacy it may be important that policies are perceived as equitable. Although the principle that polluters should bear the costs of emission reductions is widely accepted, for both practical and political reasons this may be difficult to implement. In the area of mitigation, the development of reliable emissions inventories has allowed reduction objectives to be imposed initially on those industrialized countries primarily responsible for the problem and best able to afford emissions reduction. Understanding of the costs and benefits of adaptation, on the other hand, has been significantly more limited.¹⁷ Questions of who bears responsibility and who should pay are more difficult to resolve, in part because the anthropogenic contribution to climate variability cannot be determined with accuracy, and partly because vulnerability to impacts may have been self-inflicted by unwise development choices. In principle, the costs of adaptation could be borne by its beneficiaries; by the public (through governments) as a right to avoided harm; by emitters of greenhouse gases who ultimately cause the harm; or by those who will benefit from the impacts of climate change. While having polluters pay for adaptation has greatest normative appeal, public compensation and “risk spreading” is likely to be more feasible.¹⁸

Climate Policy in the EU

EU climate policy-making began seriously to take shape in the early 1990s. In the following subsections, we outline in turn the emergence of EU policy on mitigation and adaptation, highlighting how key decisions and landmarks indicate particular choices and dilemmas being addressed in more or less explicit ways.

The EU as World-leading Mitigator

Ever since the problem emerged on domestic and international political agendas in the late 1980s, the EU has been a leading advocate of the need to address climate change first and foremost through mitigation, guided in a top-down manner by targets and timetables fixed under the multilateral institution of the UNFCCC, whose establishment in 1992 the EU strongly supported. A key moment in the EU’s problem framing came with the adoption in 1996 of the figure of 2°C above pre-industrial temperatures as the key mitigation target, seen as necessary to fulfill the UNFCCC’s headline objective of avoiding “dangerous” climate change.¹⁹ At this time, it was believed that keeping atmospheric concentrations below 550 ppm CO₂ would deliver it.

While committed to the stabilization of greenhouse emissions at 1990 levels by 2000, the EU’s own policies in the early 1990s remained largely symbolic in nature, as this objective could mostly be achieved through existing, broadly national-level actions, rather than requiring additional,

¹⁶ Thompson 2003.

¹⁷ EEA 2007.

¹⁸ Farber 2007.

¹⁹ 39th Council meeting, Luxembourg, 25 June 1996.

pan-European policies. Bold initiatives, in particular the 1991 proposal for an EU-wide carbon/energy tax, were blocked by the member states, in the knowledge that emissions were already set to decline for reasons related to economic and energy market restructuring in Germany and the United Kingdom.²⁰ As that decade progressed, such trends allowed the EU to remain united in agreeing to long-term mitigation goals, principally in the form of the 2°C objective and the 8 percent by 2012 collective reduction target assigned by the Kyoto Protocol of 1997.

For the EU, Kyoto represented a critical landmark on the road toward ensuring that dangerous change was avoided. Thereafter, the need to deliver the 8 percent target served as the principal “problem” to which EU climate policy was oriented, prompting changes to the handling of various choices and dilemmas. Specifically, it spurred innovation in the policy instruments the EU would use to reach it, the scale at which they should be set, and how they should be calibrated so as to share the burden of emissions reduction in a manner perceived to be fair.

With regard to the level of governance, the late 1990s and 2000s witnessed a steady trend of harmonization with respect to mitigation policies, countenanced by member states who recognized the need for a greater role for the Commission if the collective Kyoto target was to be reached. More innovative policy instruments were considered and many more of the Commission’s proposals adopted as Common and Coordinated Policies and Measures. The sudden conversion to the hitherto “alien concept” of emissions trading was striking in view of the EU’s usual reliance on more direct regulatory approaches.²¹ To a large extent this innovation was motivated by the perceived need to re-engage the US – at whose insistence emissions trading had been included in the Kyoto Protocol, but which had subsequently withdrawn from it – in international efforts. The decision in 2008 to base the emissions trading scheme (ETS) on an EU-wide emissions cap, rather than continue with nationally based allocation of allowances, represented a major increase in the powers of the Commission, and provided a major boost to the instrument’s effectiveness.²²

With respect to choices related to distribution of costs and benefits, the EU has handled these innovatively – and rather successfully – via a series of increasingly formal and essentially hierarchical burden-sharing arrangements. These have been premised on the understanding that richer member states should do more than poorer ones, to allow the EU as a whole to converge toward broadly equivalent per capita emission levels. While challenging to construct, once created these agreements have kept the EU focused and united.²³

Since 2005, in addition to focusing on complying with the Kyoto Protocol (lest failure undermine its claims to leadership), the EU has also developed internal policies for the period after 2012, and prepared the ground for a successor agreement. Internally, the adoption of the 2008 climate and energy package, a complex combination of policies designed to reduce emissions by 20 percent and boost the share of renewable energy to 20 percent by 2020 (again based on higher commitments from richer member states) constituted a key landmark.²⁴ This included provision that, as part of a global deal, the cut could be increased to 30 percent, provided other industrialized economies made meaningful commitments.

Summarizing the overarching issue of problem framing, it is significant that throughout the 1990s and 2000s, mitigation measures were rarely framed exclusively in relation to climate

²⁰ Jordan et al. 2010.

²¹ Van Asselt 2010.

²² Van Asselt 2010.

²³ Haug and Jordan 2010.

²⁴ European Commission 2008.

benefits. Other benefits – be they in terms of the smooth functioning of the EU's internal market, greater economic competitiveness and energy security, or the exercise of “soft” power – were heavily emphasized. In doing so, EU policy-makers were able to galvanize sufficient action across the Union to deliver modest levels of mitigation, sufficient at least to ensure the Kyoto commitment was delivered. The assumption was always that the rest of the world would eventually follow the EU's lead, sharing the burden of emissions reduction globally, and that climate change would be handled essentially by successful mitigation efforts. Before we note how this assumption weakened in 2009 in context of the Copenhagen conference, we first outline the development of the EU's adaptation policy.

... But a More Reluctant Advocate of Adaptation?

For policy-makers in many parts of the world, but especially Europe, adaptation has been – for the reasons noted above – something of a taboo subject. However, as the developing science of climate impacts indicated that even 2°C of warming would require significant adaptation, the EU's reluctance to acknowledge the issue has declined greatly, particularly since the mid-2000s. In keeping with the tendency to treat the issue separately from mitigation, policy development was coordinated by the water unit within DG Environment,²⁵ rather than one more obviously related to air pollution control.

In terms of the EU's emerging *problem framing*, it is now accepted that key sectors including agriculture, forestry, water, coastal zone management, biodiversity and health will experience effects that will require adaptation. However, its adaptation policy has not advanced much beyond the production of a White Paper.²⁶ One of the main reasons is that compared to mitigation, the problem cannot easily be connected to the standard rationales for EU action – such as the promotion of an internal market in products and services.²⁷ In fact, adaptation is often framed by EU-level governors as a problem that will to a large extent resolve itself via “autonomous” actions by private actors, or by measures taken by member state governments, a number of whom have pioneered national adaptation strategies.²⁸ Arguably, the only problem framing that has led to significant policy development at the EU level is connected to the norm of social and economic cohesion, as expressed in the name given to the EU's chief funding instrument – the Solidarity Fund. Established in 2002 in the wake of severe flooding in Central Europe, this Fund assists with public sector reconstruction after disasters, climate related or not.

Another reason for the as-yet limited policy response may be the continuing uncertainty in terms of temperature change and precise incidence of effects to which the EU will need to adapt, which remain unclear in the White Paper. Nor is the Paper very precise about what it means by adaptation; the overall objective is simply said to be “to improve the EU's resilience to deal with the impact of climate change.”²⁹

More so than with mitigation, the question of which *level of governance* should be responsible for which aspects remains problematic for EU adaptation policy. Compared to mitigation, states are less reliant on one another to achieve policy results, and no global, hierarchical set of policy targets and timetables exists to galvanize a collective response. As

²⁵ The Commission's Directorates-General (DGs) are equivalent to national ministries.

²⁶ European Commission 2009.

²⁷ Rayner and Jordan 2010.

²⁸ Swart et al. 2009.

²⁹ European Commission 2009, 7

already noted, the locus of adaptation decisions tends to be regarded as more local, among the most directly affected populations and institutions. In the face of considerable uncertainties surrounding the spatial and temporal incidence of climate impacts, as well as the diversity of regions and national institutional arrangements (and regarding which social, environmental, and economic attributes are most valued), a “one-size-fits-all” approach has been regarded as neither necessary nor desirable. Nevertheless, key policies in a range of sectors significantly at risk from climate change are already made at the EU level. EU policy-makers have therefore been able to justify a European-level framework for action in such sectors as agriculture and water, and to invoke the need to ensure that funding for regional investment is “climate proof.” A supranational role also appeared legitimate in order to prevent cross-border effects, or “maladaptation,” arising from domestic adaptation efforts; flood defenses on a shared river in one country causing flooding in a neighbor, for example.

These choices have left their mark on the *modes and instruments* of adaptation policy in the EU. Here, policy-makers (at all levels) were faced with the issue of whether to devise wholly new instruments dedicated to adaptation or to seek to “mainstream” responses into existing policy frameworks. In terms of dedicated instruments, these have been very much network based. The mainstreaming approach remains the preferred one, at least until 2012, after which time a more concrete strategy is due to emerge. At the same time, interest in exchange of best practice from member states has led to the creation of new EU platforms, such as the clearing house mechanism.³⁰

Finally, it is noticeable that understanding of the *costs and benefits* of adaptation is still limited, and questions of who should bear responsibility and who should pay have yet to be addressed. However, in the wake of a series of extreme flooding events in Central and Eastern Europe, it is becoming clear that the financial impact of building the adaptive infrastructure or responding to counter the impacts of such events can be very high in relation to state budgets, particularly of poorer member states. Current fiscal pressures and low growth rates are reducing the future room of maneuver.³¹ While the EU may consider making finance more readily available, doing so would give rise to a significant dilemma of moral hazard, whereby suboptimal adaptation decisions at the national level are deliberately made in the expectation that, should disaster strike, supranational “bailouts” will be available.³²

Mitigating and Adapting? New Choices; New Dilemmas

The Copenhagen conference in many ways marked a watershed for EU, and indeed global, efforts to address climate change. Certainly it served as an unpleasant corrective to the idea that the EU’s chosen model for action, particularly its preference for firm mitigation targets and timetables, was supported globally.³³ The EU’s offer to increase its reduction commitment to 30 percent, if other industrialized states made meaningful commitments, had no discernible impact on the negotiations. Although the Copenhagen Accord repeated the 2°C limit as a mantra which apparently still commands wide international agreement, the “bottom-up” mitigation commitments subsequently offered by signatories were a long way from delivering it. Even after EU negotiators’ more heartening experience at the Durban conference in December 2011, the prospect of emissions being reduced rapidly toward a pathway more likely to deliver 2°C

³⁰ European Commission 2009.

³¹ CEPS 2010.

³² Hochrainer et al. 2010.

³³ Haug and Berkhout 2010.

remains uncertain. To make matters worse, scientific advances suggest that limiting increases to 2°C will likely require significantly lower atmospheric concentrations than originally assumed, and that such a rise actually entails impacts more dangerous than previously thought.³⁴

In this new era, the EU is faced with critical decisions on both mitigation and adaptation. Regarding mitigation, it must decide whether and how far to increase its level of ambition, not so much as an act of international diplomatic strategy, but for the sake of various benefits this could bring *internally*. These benefits, however, are much disputed. In an era when the largely cost-free, fortuitous emission reductions delivered in the 1990s have been used up, and policy-makers are above all prioritizing the reduction of public sector debt burdens, “ecologically modern” arguments that unilaterally adopting a 30 percent reduction target will improve EU competitiveness have failed to gain traction. To countries such as Poland, the costs of increased ambition appear too high, the benefits too diffuse. Moreover, even a 30 percent by 2020 target falls short of what the science suggests is required to give any realistic chance of limiting warming to 2°C.³⁵ Consciously or not, the EU’s political leaders are accepting a future in which the world has to adapt to average temperature increases significantly in excess of 2°C, the target to which the Union is, at least officially, still committed. In addition to its mitigation efforts, the EU must therefore also confront more explicitly the issue of how to ensure effective adaptive action in preparation for climate impacts on European territory potentially at the more severe end of projections.

On what basis, then, might policy in this new era proceed? What kind of broad problem framing might be appropriate? While some have invoked an economic framing to suggest that an optimal balance between mitigation and adaptation exists, the costs and benefits of climate change are too widely distributed over disparate actors, geographic and temporal scales, and the uncertainties relating to costs of mitigation, adaptation and residual impacts too large for the most efficient combination to be determined.³⁶ Rather than pursuing an illusory optimum, emerging opinion suggests that the most appropriate way forward is to broaden the range of policy options that policy-makers consider, and better address the links between mitigation and adaptation, in ways that: *avoid trade-offs*; *identify synergies*; and *mainstream* both mitigation and adaptation considerations into broader sustainable development policies.³⁷ We now run through these proposed imperatives one by one, elaborating on some of their implications for EU policy and governance.

Avoiding Trade-offs

The principle here is that in considering adaptation options, their consequences for mitigation should be routinely taken into account, and vice versa. The most widely noted potential trade-offs include the “adaptive emissions” that arise from increased usage of air conditioning and energy-intensive desalinization of water.³⁸ But trade-offs also work in the other direction, and their avoidance will require a considerably more sophisticated understanding of how mitigation (or indeed any other) policy can create or perpetuate vulnerabilities that undermine adaptation goals.

³⁴ Adger and Barnett 2009.

³⁵ IPCC 2007.

³⁶ Swart and Raes 2007.

³⁷ Swart and Raes 2007; and Biesbroek et al. 2009. Swart and Raes also identify the need to *enhance and apply response capacity*, which we find too general a category to merit further discussion here.

³⁸ Klein et al. 2007.

As noted above, one aspect of problem framing is to identify relevant sectors where action is needed. As both mitigation and adaptation objectives become more pressing, sectors are becoming less distinct in terms of which are expected to contribute to mitigation goals (and to what extent) and which to adaptation; a more complex, overlapping picture emerges. Apart from sectoral or horizontal issues of coherence (examined below), there are also vertical considerations that cut across governance scales. Policy-makers need to be aware, for example, that mitigation policies set at higher scales could exacerbate vulnerabilities or impede adaptation at a local level. One such danger arises from the requirement on member states to meet targets for biofuels, if water-intensive bio-crop production were to take place in water-scarce or biodiversity-rich areas. Some forms of afforestation also present risks of this kind.³⁹

Synergies

Synergistic policies are those that reduce greenhouse gas emissions *and* the vulnerability to climate change. The 2009 Adaptation White Paper calls for priority to be given to measures that are also beneficial for mitigation. In principle, synergistic actions should be possible, particularly in areas with strong linkages such as energy and water use. The energy sector needs water for power plant cooling, while for its part the water industry requires a significant amount of energy to supply its users and treat waste. In future it will likely take more energy to maintain supply to increasingly water-stressed regions – particularly if desalinization becomes more widely practiced. A policy for water efficiency therefore serves both mitigation and adaptation objectives. Consensus in the (still limited) literature on linkages is that potential for synergy can also be found in urban planning, agriculture, and forestry.⁴⁰ Better protection of soils, for example, would improve carbon sequestration, long-term food security and flood protection.

Potentially another area of high synergy could be the allocation of revenues from the auctioning of emissions allowances under the ETS, in accordance with the polluter pays principle, to fund adaptation measures. In this case, since revenues increase with the carbon price, which itself rises with the ambition of emission reduction targets, a strong commitment to mitigation can be of direct benefit to adaptation goals. However, member states vary in their attitude to the “earmarking” or “hypothecation” of such revenue.⁴¹ In other areas, mitigation and adaptation policies are less obviously connected. In these cases, efforts should at least be made to avoid trade-offs as far as possible.

Pursue Mainstreaming

The creation in 2009 of a new, DG for Climate Action (DG Clima) may facilitate the improved coordination of adaptation and mitigation policy at the EU level. However, this new DG needs to engage the rest of the Commission. According to no less a figure than the Commission President, “[e]ach and every Community policy will need to be assessed and if necessary adapted in the light of climate change.”⁴² A new directorate within DG Clima has been dedicated to “mainstreaming adaptation and low carbon technology.” Mainstreaming of adaptation is due to run until 2012–13, when more-concrete adaptation strategies are due to be adopted. We reflect on the broader challenges facing those promoting mainstreaming in our final section.

³⁹ Ellison 2010.

⁴⁰ Swart and Raes 2007.

⁴¹ Müller 2008.

⁴² Barosso 2009, 23.

Before that, we must highlight a new manifestation of the *problem-framing* dilemma that will need to be faced by climate policy-makers in the post-Copenhagen era.

Two Degrees or Four?

Whatever the potential synergies – or at least broad compatibility – between mitigation and adaptation policies in principle, there is another more fundamental dilemma of problem framing and objective setting only just beginning to attract attention. As noted at the outset, high-level statements of policy framing and commitment send signals to target groups that have consequences in terms of eventual implementation and outcomes, potentially closing off alternative approaches. One key danger now facing EU policy-makers is that by clinging to the line that temperature rises will not exceed 2°C, it is possible that an inadequate level of adaptation will occur. Temperatures could rise 4°C by the 2070s, or even as early as 2060 given strong positive feedbacks in the carbon cycle.⁴³ While adapting to 2°C may mostly involve incremental adjustments of existing practices, “a world at 4°C presents large and complex challenges that are likely to require fundamental socioeconomic and technological transformations, rather than adjustments – assuming such transformations are achievable through planning at all.”⁴⁴ The new but increasingly prevalent discourse of “mitigate for 2°C but adapt to 4” responds to this understanding, attempting to maintain pressure for ambitious mitigation while *also* highlighting the need to plan to adapt to much higher temperatures. Questions can be asked, however, about the political credibility and risks associated with this strategy.

In EU policy terms, the 2°C target has provided a framing of the problem that diverse leaders have found acceptable and which has provided the EU with an important “identity” in global negotiations. Implicitly it has been regarded as broadly achievable with existing forms of burden sharing. Significantly, it has also provided a signal to investors (and third countries) that the EU is strongly committed to mitigation.⁴⁵ Arguably, acknowledgment that it may be impossible to reach risks taking pressure off mitigation efforts, in just the way those placing the taboo on discussion of adaptation originally feared.

Conversely, any loosening of the 2°C target would serve as an acknowledgment of the need for increased financial transfers in a warmer world, raising the complex issues of liability and compensation that developed countries have preferred to keep off the agenda. Vulnerable regions and sectors would inevitably demand increased resources to cope with the predicted impacts, raising the fraught issue of adaptation burden sharing, both globally and within the EU. Potentially, negotiations within the EU could be far more complex than for mitigation burden sharing: in some way, richer northern member states would have to agree to finance their southern, central and eastern counterparts, expected to suffer the greatest impacts and with fewer resources to cope.⁴⁶ Agreeing on criteria by which to raise and allocate funds would require a distinction to be made between unavoidable impacts from climate change and those in some way “self-inflicted” by maladaptive policies.

Conclusions and Prospects

This chapter has outlined how, by skillful handling of a range of climate governance choices and dilemmas, the EU emerged from the 1990s as a global leader in mitigation policy. In order

⁴³ New et al. 2009.

⁴⁴ New et al. 2009, 144.

⁴⁵ Jordan et al. 2010.

⁴⁶ Jordan et al. 2010.

to deliver jointly held targets, member states showed themselves willing to countenance an unprecedented centralization of policy and new policy instruments going against preferred regulatory forms. After Copenhagen, however, in an era of more fragmented global governance frameworks and economic austerity, continued willingness of member states to be bound into ambitious EU-level solutions cannot be taken for granted. Other benefits from more ambitious common policy have yet to appear sufficiently attractive to secure consensus, putting the EU and the rest of the world on course for the “dangerous levels” of climate change it has long professed a desire to avoid.

While maintaining a suspicion regarding the adaptation agenda, the EU has taken some first steps toward improving its own adaptive capacity, creating a Solidarity Fund and setting in train a process of mainstreaming to review the suitability of existing policies. It may be, however, that more severe “focusing events” such as floods and droughts will have to occur before the problem is framed as sufficiently urgent for a more common adaptation strategy to emerge, employing stronger regulatory instruments, and based on better understanding of how existing “maladaptive” policies create and exacerbate vulnerabilities. Questions of what temperatures to adapt to, and how to share burdens, have until now effectively been matters of “non-decision-making.” The uncomfortable dilemmas they give rise to serve to remind us of exactly *why* adaptation was for so long considered “taboo.”

The chapter has also described how, in the last 10 years and especially since the Copenhagen conference in late 2009, policy-makers have started to explore policy portfolios that can facilitate *both* mitigation and adaptation. Progress toward more ambitious responses, on both mitigation and adaptation, and the limited number of policies that promote both, often seems to require a greater coordinative role for the EU. For the moment, however, member states remain reluctant to grant this. For example, securing funds for adaptation from ETS auction revenues requires a greater level of agreement to the earmarking of funds; to date, member states have shown little appetite for compulsory hypothecation. Nor have they shown much enthusiasm for the Commission’s proposals for the protection of European soils, nor improved water efficiency standards, whatever the potential synergies of such measures might be.

Despite the Commission’s reassuring rhetoric regarding sectoral mainstreaming, the challenges facing the EU are huge, both in terms of the physical changes needing to be adapted to, and the governance mechanisms through which adaptation could be promoted. The prospect of 4°C warming means that it won’t be enough simply to “climate-proof” business as usual; instead, a more “transformative” adaptation, engendering a more fundamental questioning of existing development models and how they may work to exacerbate vulnerabilities, may be required.⁴⁷ How far the most powerful sectoral DGs and member states will be willing to see a correspondingly radical overhaul of policy and in particular spending – removing funds from vulnerable or carbon-intensive investments and reassigning them for adaptation-related ones – remains a moot point.

On this question, the EU’s past experience of how challenging it can be to shift well-established sectoral objectives and practices in the interests of environmental policy integration is somewhat salutary. Begun optimistically in 1998, by late 2002, the production of new sectoral strategies and/or the updating of existing ones under the “Cardiff process” had effectively ceased, overshadowed by a new focus on social and economic reform.⁴⁸ The EU’s drive for

⁴⁷ Stafford Smith et al. 2011, 199.

⁴⁸ Jordan et al. 2008.

environmental policy integration was handicapped by a lack of high-level political leadership, and by its reliance on a relatively small number of fairly weak coordination instruments. Sectoral strategies tended to accumulate in a rather incremental manner, not well harmonized with one another; a problem exacerbated by the particularly “pillarized” nature of EU sectoral policy-making.⁴⁹ Policy-makers will need to draw hard lessons from this experience if the same mistakes are not to be repeated in future efforts to promote climate policy integration. It would be especially unfortunate if they were; the stakes now are higher than ever.

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⁴⁹ Jordan et al. 2008.

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18 Climate governance experiments

Matthew J. Hoffmann

In 20 years of trying, the multilateral treaty-making process has been fearfully inadequate for producing the rules and institutions necessary to meet the challenge of climate change. Yet, far from lacking a response to climate change as the UN process has floundered, the world is, rather, awash in different approaches.¹ Global networks of cities are working to alter municipal economies, transportation systems, and energy use. Corporations are forming alliances with environmental nongovernmental organizations (NGOs) to devise large and small ways to deliver climate-friendly technology and move towards a low carbon economy. States, provinces, environmental organizations, and corporations are engaged in developing carbon markets that promise low-cost means of reducing emissions. These *climate governance experiments* are shaping how individuals, communities, cities, counties, provinces, regions, corporations, and nation states respond to climate change.²

So there is a paradox in the governance of climate change – stalemate on the multilateral level combined with multilevel dynamism beyond the interstate negotiations. I contend that we are witnessing the emergence of a new mode of governance – experimental governance – one that is decentralized while also being networked and showing signs of nascent coherence. The emergence and functioning of this new governance system will play a significant role in the overall global response to climate change and may portend the effective response needed to avert the impending climate crisis. In this brief chapter, I describe this experimental governance – what it looks like and how it is unfolding – and examine its potential impact on the global response to climate change.

The Experimental World

The range of activities seeking to fill the void of a breakdown in the multilateral treaty-making process is wide, but particular innovations – *experimental* attempts at *governance* – are worthy of particular scrutiny for their potential to generate catalytic change in the global response to climate change. These climate governance experiments are explicitly engaged in making rules – they go beyond lobbying and entail a conscious intention to create/shape/alter behavior by setting up rules (broadly conceived as including principles, norms, standards, and practices) for a community of implementers (whoever and whatever they may be) to follow. But being experimental means that they are engaging new actors and new types of rules – they are not associated with the multilateral treaty-making process or national regulatory measures. This is the kind of activity Rosenau envisioned when he defined governance as a matter of having the capacity to get things done without the formal authority to do so.³ In addition, experimentation means trying out new configurations and governing political spaces that did not exist before. Climate governance experiments function across established jurisdictional boundaries whether

¹ Andonova et al. 2009.

² This chapter draws upon a larger study of climate governance experiments in Hoffmann 2011.

³ Rosenau 1997.

vertically (local–regional–national–transnational) or horizontally (networks of similar actors across boundaries). Experimentation is thus a process of making rules outside well-established channels. It is cities forming transnational networks.⁴ It is US states and Canadian provinces cooperating on climate agreements.⁵ It is NGOs and corporations forming alliances. Experimentation is making policy, as Hajer says, without a polity (Table 18A.1⁶ in the Appendix provides a list of 58 experiments examined in the broader study).⁷

This phenomenon of climate governance experimentation is a recent one, for instance 46 of the 58 experiments listed in Table 18A.1 were initiated after 2001. At this stage in its development the experimental system of governance is also mainly a Northern phenomenon. All 58 experiments were instigated either by Northern actors (51) or partnerships between Northern and Southern actors (7). Yet implementation of experimental activities is global in scope, with experiments acting all over the world at multiple scales. Every possible scale of political actor is engaged in experimentation – individuals, communities, municipalities, NGOs, corporations, states, nation states, and intergovernmental organizations. There is also significant diversity in what experiments do (see Table 18A.2 in the Appendix).

There is clearly a lot being done by a lot of different actors. But this is potentially troubling. If all is cacophony, if collectively the experiments are just a series of disorganized, random attempts at doing *something* to address climate change, then there is little reason to suspect that they will have a broader impact on the global response to climate change no matter how innovative or important any particular experiment might be. I contend that these disparate initiatives are actually of a kind and can be considered collectively as the basis of an experimental system of governance. When examined as a group, rather than individually, it is clear that experimental governance activity is developing in a relatively coherent, if decentralized and unconscious, fashion. Far from being random, climate governance experimentation is patterned in important ways that will determine if and how this new mode of governance can produce or induce an effective response to climate change.

At a broad level, a shared philosophical worldview of liberal environmentalism underpins the experimental system of governance.⁸ Climate governance experimentation, in the main, entails a voluntary, market-oriented approach that is focused on mitigation rather than adaptation. Market mechanisms – pricing carbon, emissions trading, economic incentives, and the joint pursuit of greenhouse gas emissions and profit – dominate the ways experiments answer the question of how climate change should be appropriately addressed. Climate governance experiments are, for the most part, advocating climate action by making the case that such action is or will be economically beneficial.

Beyond generally sharing an orientation, the collection of experiments also exhibits both functional differentiation and substantive clustering. Experiments can be readily grouped into four archetypes or governance models on the basis of how they are responding to climate change:

- *Networkers* such as The Climate Group and 2degrees respond to climate change by fostering information exchange, undertaking educational activities, meeting to discuss best practices, or even just putting actors interested in climate change together.

⁴ Betsill and Bulkeley 2004; and Bulkeley and Kern 2006.

⁵ Rabe 2004, 2007; and Selin and VanDeveer 2009.

⁶ For a full examination of these experiments, see Hoffmann 2011.

⁷ Hajer 2003.

⁸ Bernstein 2001 developed the concept of liberal environmentalism. See also Newell and Paterson 2010.

- *Infrastructure builders* such as The Climate Registry and the Carbon Disclosure Project see their role as building the capacity of diverse actors to engage in the global response to climate change – facilitating the measurement of carbon footprints, certifying of carbon credits, and developing climate action plans.
- *Voluntary actors* such as the C40 group of large cities ask implementing actors to take direct action to reduce greenhouse gas emissions, but have little in the way of accountability or oversight over their members.
- *Accountable actors* such as the Western Climate Initiative take action, but include provisions for oversight and accountability.

Each experiment plays one of these roles in the nascent experimental governance system. The world of climate governance experiments is far from a random assortment of initiatives and is actually quite structured, with clear functional differentiation on top of a common philosophical foundation. Instead of thinking of experiments as idiosyncratic, we can think of them as playing specific roles or embodying specific identities in the global response to climate change.

The differentiation is indeed functional, not just because it is a matter of different functions, but because it facilitates the emergent functioning of the experimental system. Specifically, clusters of experimental activity have emerged as sites where experiments interact and build relationships with each other as well as with other participants in the global response to climate change. Climate governance experiments are not isolated initiatives. On the contrary, relationships within the experimental world are now evident including, networking, a combination of competition and cooperation between initiatives, the emergence of communities of practice, and the development of redundancy in the system facilitated by the functional differentiation.

One example of this phenomenon is a cluster of experimental activity geared towards deploying climate-friendly technology in cities. At one level, implementing cities are often engaged with multiple experiments and participate in multiple municipal networks. For instance, Seattle was listed as a low carbon leader in September 2005 by The Climate Group for its efforts to improve energy efficiency.⁹ Yet part of Seattle's program on energy efficiency relies on corporations engaged with the ClimateWise experiment. So we have pursuit of technology deployment in cities recognized and facilitated by The Climate Group, but at least somewhat dependent on corporate activities shaped by a different experiment altogether. This is not an isolated case. One-fifth of the C40 cities also engage either with The Climate Group (Chicago, formerly a member, Hong Kong, London, Mumbai, New York, Toronto) or the Connected Urban Development Program (Seoul, Madrid), and four (Chicago, Los Angeles, New York, and Philadelphia) of the five US cities in C40 also signed the US Conference of Mayors Climate Protection Agreement.

Beyond overlapping cities in networks and experimental programs, the experiments themselves interact both cooperatively and competitively. There are a number of linkages across experimental initiatives and a range of different ideas about deploying technology in municipalities and their networks. Experiments are working in similar areas, and while their goals may be the same, the way they approach them can be very different, and the funds available for pursuing projects are limited. Competition is a natural outgrowth. In fact, The Climate Group has some concern that cities are actually being bombarded by technology

⁹ The Climate Group 2005.

solutions at the moment and that funding and capacity need to catch up if the hoped-for market transformation is to come to pass.¹⁰

Thus diverse experimental activities held together by a commitment to deploying climate-friendly technology in cities are developing relationships of multiple kinds and redundancy is becoming evident as multiple initiatives experiment with diverse approaches to deploying technology. There is emerging what one of my informants described as a “messy complementarity.”¹¹ This phenomenon is also evident in the development of voluntary carbon markets, emissions trading fora, and even in the emergence of “new” multilateral approaches. Experiments are self-organizing – developing networks and relationships in specific, substantive areas.

Impact and Effectiveness of the Experimental World

All of this diverse, but patterned, experimental activity is indicative of an emerging organized, if decentralized, means of governance that does not rely on a top-down, multilateral treaty to catalyze action on climate change. Such a system is still nascent but it has enormous contrasts with the Kyoto process. It involves multiple actors and diverse rule-making practices, as opposed to set actors and an established, singular means of making rules. It is flexible, whereas the multilateral process is tied to consensual decision-making. It includes a myriad of actors at the outset instead of at the tail end of implementing a treaty. It has areas of questionable political authority instead of the standard authority of international law and sovereignty, but in bringing together like-minded actors around a range of activities, enforcement might be less of a significant issue. Yet the nascent emergence of an experimental system of governance is not a guarantee of effective action on climate change. The real question is whether and how climate governance experiments can catalyze the kind of revolution in economic and energy systems necessary for dealing with the climate crisis.

What climate governance experiments *may* be able to do for the global response to climate change is provide, first, a source of friction in politics and markets that catalyzes demand for broad transformation in societies and economies,¹² and second, a source of smoothing that provides the technologies and institutions to respond to the demand for transformation. Experiments thus have the *potential* to create disruptive and productive change, shaping how groups of individuals, corporations, cities, subnational governments, and even nation states address climate change and altering the way politics and markets function.

Climate governance experiments generate friction by pushing the boundaries of traditional notions of which actors are responsible for making rules, creating uneven sets of rules that actors must follow, and generating new coalitions committed to climate action. This friction, in turn, may be able to catalyze broader change as other actors (including national governments) and processes (for example, multilateral negotiations) and arenas (for example, global markets) react to the friction. Experiments can facilitate a positive reaction to the friction as well, smoothing the path of the response to climate change by building institutional, technological, and political capacity. It seems self-evident yet important to note that the experiments discussed here are *experimenting* – as the founder of the Transition Towns experiment put it: “We have this thing called the ‘cheerful disclaimer’ – which means we have no idea if the idea is going

¹⁰ Interview with staff member of The Climate Group.

¹¹ Interview with staff member of EUROCITIES.

¹² See Wapner 1996; and Rabe 2004, 2007 on the phenomenon of catalytic change coming from subnational and transnational actors in environmental issues.

to work or not. It's an invitation to have a go."¹³ They are trying out a multitude of ways to attack this problem, learning lessons that may be more widely applicable. Through both of these processes, friction generation and smoothing, experimentation may be able to create significant momentum for the global response.

Whether climate governance experiments *will* be catalytic, depends a great deal on how the experimental system of governance develops. The relevance of climate governance experimentation turns on how relationships and interactions among experiments and between experiments and other arenas of global climate policy develop and progress. In terms of the development of the experimental system itself, two plausible trajectories for development are evident: division of labor (positive) or sorting (negative).

One way to conceive of the experimental system of governance is that a division of labor is emerging. By specializing and breaking down the tasks into manageable pieces, perhaps a more effective decentralized global response will emerge. Already within a decade of the emergence of experiments, we see this kind of developing specialization in the functional differentiation among experiments. Infrastructure builders such as registries and investor networks provide the information necessary to make decisions about carbon and measure the changes in greenhouse gas emissions. Networkers make sure that best practices and the most up-to-date information about technology can spread quickly. Voluntary action and accountable action experiments draw on the foundation set by other experiments to proceed with specific cuts to greenhouse gas emissions (tailored to their particular level of political authority). The relationships and interactions made possible by functional differentiation could lead to efficiencies and effective means of generating friction and catalyzing disruptive change in the larger global response to climate change.

The development of voluntary carbon markets is a quintessential example of this dynamic. Climate registries or disclosure initiatives (The American Carbon Registry, the Carbon Disclosure Project) and offset standard setters (the Climate Action Reserve, formerly the California Climate Action Reserve) are crucial parts of the infrastructure necessary for carbon markets and emissions trading systems to function. A whole ecosystem of infrastructure builders is emerging so that actors can measure, account for, offset, and trade emissions – in both the experimental world and the more conventional climate governance world (the trading system set-up by the Kyoto Protocol and/or the EU).¹⁴ These infrastructure builders provide services that voluntary and accountable actor experiments need to function. For instance, emissions trading systems such as the Western Climate Initiative and the Regional Greenhouse Gas Initiative need to have reliable ways to measure greenhouse gas emissions and certified offset credits. This knowledge is increasingly being developed in the experimental system by registries and offset certifiers.

Yet we should be cautious as the division-of-labor path is not the only conceivable way that the experimental system may develop. Different experiments may fulfill different roles in the experimental system, but it could be a far from efficient or effective specialization. Experiments could generate substantive clusters in a way that works against catalytic change. Instead of a division of labor, we could see ineffective sorting. With the opening and fragmenting of climate governance, actors are able to create and/or join experiments that suit them and their preferences

¹³ Rob Hopkins, 2010. Quote taken from <http://www.newscientist.com/article/mg20527466.000-rob-hopkins-getting-over-oil-one-town-at-a-time.html?DCMP=OTC-rss&nsref=online-news>, accessed 9 February 2010.

¹⁴ Bumpus and Liverman 2008.

best. They can strategize, asking what is best for me materially and/or what is appropriate for my values. Actors may find just the right kind of experiment that suits their needs and values. The United States was at the forefront of pushing voluntary, small-group multilateralism during the Bush administration because it fit their interests in moving slowly on climate change. Experiments such as the Major Economies Forum and the derided Asia Pacific Partnership¹⁵ were the result. Every actor may find an experiment to suit its interests, but this does not necessarily equal an effective response to climate change. If experimental sorting occurs in the absence of legally binding enforcement of broader climate change goals and activities, it may not provide an effective catalyst for climate action. If substantive clustering emerges in a way that allows experimenters to remain comfortable, just doing what they have always done, disruptive change will be difficult to achieve through experimentation. Friction will not develop and experimentation will not catalyze broader change.

The relevance of climate governance experimentation is thus far from guaranteed. Leadership is needed to ensure that a division of labor wins out over sorting so that the experimental system can be a source of catalytic friction. The first step is merely recognizing that there is an experimental *system* of governance that can provide resources for furthering momentum on climate action. The explosion of climate change initiatives we have seen in the last decade are not idiosyncratic or random interventions – they are part of a relatively coherent, though decentralized and self-organized governance system. Understanding how the experimental system is emerging and organizing will facilitate creating a division of labor within that system.

Moving from envisioning a division of labor to building one requires enhancing the connections and niches that are already emerging. To their great credit, most of the experiment initiators examined in my research realize this and have made it a priority. The Climate Group, for instance, has signaled that making more connections is a key element of their strategy moving forward. They are looking for additional networks within which they can disseminate the results of their pilot studies to further the momentum behind market transformation.¹⁶ More of these connections can be built, taking advantage of the common language that all these experiments speak – based on the premise that climate change can be addressed in a way that enhances economic growth – and the functional differentiation and activity clusters in the experimental system.

Beyond the experimental system, links need to be built with the multilateral treaty-making process. Two decades of failed treaty making have led observers to declare the multilateral process in crisis or at least that the role of multilateral treaty making in the response to climate change is destined to change.¹⁷ Rather than, or in addition to, negotiating comprehensive treaties designed to structure the overall global response to climate change, there will be an increasing need for smaller, more targeted negotiations.¹⁸ The friction that is emerging from the experimental system will provide ample opportunities to cement multilateral cooperation on *specific* issues. Multilateral climate negotiations will not and should not be abandoned. Yet we may need to adjust our thinking on what they can accomplish and the kind of issues they are best suited for addressing.¹⁹ Treaty making may be more fruitfully employed to ratify and

¹⁵ Lawrence 2007.

¹⁶ Interview with staff member from The Climate Group.

¹⁷ See, for example, Depledge 2006; Aldy and Stavins 2007; Prins and Rayner 2007; Hoffmann 2007; and Victor 2011.

¹⁸ Benedick 2007.

¹⁹ Sanwal 2007.

further developments in the experimental governance system. As climate governance experiments create friction and offer smoothing solutions, limited-scope multilateral treaty making can be used to facilitate scaling-up, linking, and furthering the dynamics bubbling up from below. The driving force should be coming from the experimental system of governance, and multilateral treaty making can be used to enhance the innovations found there.

For instance, as national and even subnational emissions trading systems come online, a host of international cooperation issues will arise.²⁰ At the Copenhagen negotiations, the side events sponsored by the International Emissions Trading Association focused prominently on these issues of linking systems and cobbling together a global carbon market from disparate allowance and credit systems. Participants were especially interested in the monitoring, reporting, and verifications concerns involved in ensuring the fungibility of carbon credits. Other discussions centered on how to deal with the economic pitfalls of diverse cap-and-trade systems emerging – capital flight to areas that fail to regulate carbon being among the most urgent – and the border adjustment or trade measures that would be needed to ameliorate them. Multilateral negotiations and actions could also serve to enhance the transnational municipal actions. As “globally relevant” pilot projects ramp up, there is a role for traditional governance mechanisms such as international treaty making and international organization facilitation to enhance and scale up technology deployment. As one informant made clear to me, there is a role for multilateral processes to facilitate the navigation of nation-state boundaries that transnational initiatives of climate governance experiments must undertake.²¹

Conclusion

The draw of the mega-multilateral process exemplified in the Kyoto process is obvious. There is comfort in a single authoritative response that encompasses the globe and achieves binding treaties that can hold nation states accountable for taking action on climate change. A proliferation of experimental governance responses can create uncertainty on both effectiveness and legitimacy grounds. Addressing climate change through the experimental system may indeed seem going the opposite direction needed – far-fetched and even a bit naive.²² Yet, while governance experiments in the global response to climate change are new, even at this stage we can see hope for innovative change. None of the experiments exists in isolation. There are clear and growing linkages and clusters of activities. They are “pushing the envelope” of climate action and demonstrating what is possible. These efforts provide hope that the world will respond effectively to the climate crisis.

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²⁰ Bernstein et al. 2010.

²¹ Interview with staff member of The Climate Group.

²² Wiener 2007.

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Appendix

*Table 18A.1 Climate governance experiments**

Experiment	Description
2degrees	Social networking platform for actors working in corporate environmental sustainability, climate change and green technologies
Alliance for Resilient Cities	An Ontario-based network of municipalities focused on adaptation to climate change
American Carbon Registry	Apparently the world's first private emissions registry started in 1997 as the Greenhouse Gas Registry
American College & University Presidents Climate Commitment	Pledge and program to eliminate greenhouse gas emissions at US colleges and universities
Asia Pacific Partnership on Clean Development and Climate	Voluntary partnership among select countries to cooperate on technological development and implementation in a number of sectors
Australia's Bilateral Climate Change Partnerships	Agreements and partnerships signed between Australia and other countries (developed and developing) to take action on climate change
Business Council on Climate Change	Partnership of San Francisco Bay Area businesses committed to reducing their green house gas emissions
C40 Cities Climate Leadership Group	A network of the world's largest cities created to share best practices and develop collaborative initiatives to do with city-specific issues
California Climate Action Registry	Voluntary greenhouse gas registry now operating under the Climate Action Reserve
Carbon Disclosure Project	Resource/database for institutional investors to inform their investment choices based on emissions reported by the world's largest corporations
Carbon Finance Capacity Building Programme	Partnership to encourage the use of Carbon Finance to reduce greenhouse gas emissions in cities, in particular emerging mega cities of the South
Carbon Rationing Action Groups	Network of local groups to support and encourage one another in reducing individual carbon footprints
Carbon Sequestration Leadership Forum	Framework agreement between governments to promote and develop carbon capture and storage technology

Table 18A.1 (continued)

Experiment	Description
CarbonFix	Both a labeling standard setter and greenhouse gas offset supplier
Chicago Climate Exchange	Private cap-and-trade system whose members make a legally binding emission reduction commitment
Climate Alliance of European Cities with Indigenous Rainforest Peoples	Association of European cities and municipalities that have entered into a partnership with indigenous rainforest peoples
Climate, Community, and Biodiversity Alliance	Partnership between companies, NGOs and research institutes to create a certification standard to evaluate land-based carbon mitigation projects
Climate Neutral Network	A web-based platform for networking and the sharing of best practices on reducing and offsetting greenhouse gas emissions
Climate Savers	Corporate partnership between major corporations, organized by the WWF, to increase efficiency in operations/products to voluntarily reduce their greenhouse gas emissions
ClimateWise	An association of insurance-related companies/organizations established to collaborate on climate issues
Clinton Climate Initiative	Program of the Clinton Foundation that seeks to provide direct assistance to individual cities and facilitating the sharing of best practices to do with climate
Community Carbon Reduction Project	A UK-based network of local community partners that engage in education, research, and outreach to cut their CO ₂ emissions to meet a target of 60% reduction by 2025
Conference of New England Governors and Eastern Canadian Premiers Climate Change Action Plan	Voluntary agreement to pursue coordinated actions on climate change in the region
Connected Urban Development Program	Partnership between Cisco and cities to create urban communications infrastructures to reduce carbon emissions
Cool Counties Climate Stabilization Initiative	Network of counties created to address climate change

Table 18A.1 (continued)

Experiment	Description
Covenant of Mayors	Commitment by European cities to go beyond the EU CO ₂ emissions objectives through energy efficiency and clean energy initiatives
e8 Network of Expertise for the Global Environment	Nonprofit international group of nine major electricity companies from G8 countries, promoting sustainable development through electricity sector projects and capacity-building activities worldwide
Edenbee	Web-based social network (<i>à la</i> facebook) designed to encourage users to reduce their carbon footprints
EUROCITIES Declaration on Climate Change	Agreement by European cities to fight climate change at the local level
Evangelical Climate Initiative	Agreement by evangelical leaders to motivate their followers to protect the climate
Global GREENHOUSE GAS Register	A global, corporate-wide emissions registry for companies based in developing or other countries (i.e., the US) not subject to Kyoto Protocol obligations (now defunct)
ICLEI Cities for Climate Protection Campaign	Campaign that seeks to promote the development and implementation of greenhouse gas emission reduction strategies among local and municipal governments
Institutional Investors Group on Climate Change	A forum for collaboration between pension funds and other institutional investors to address the investment risks and opportunities associated with climate change
International Climate Action Partnership	International forum of governments and public authorities that are engaged in the process of designing or implementing carbon markets
Investors Group on Climate Change	Collaboration of Australian and New Zealand investors that focuses on climate-related investment risk
Investor Network on Climate Risk	A \$7 trillion network of investors geared toward integrating climate risks into investment decisions
Klimatkommunerna	Association of Swedish municipalities, counties and regions working actively on climate issues
Major Economies Forum on Energy and Climate	A “complementary” process to the Kyoto framework that brings together leaders of the world’s 17 largest economies to discuss climate change

Table 18A.1 (continued)

Experiment	Description
Memoranda of Understanding on Climate Change initiated by the State of California	Memoranda between California and various international states and subnational units/states/provinces for joint efforts on climate change
Methane to Markets	A framework agreement between countries to promote methane recovery internationally
Midwestern Greenhouse Gas Reduction Accord	Policy framework to develop a market-based cap-and-trade mechanism among Midwestern US states and Canadian provinces
National Association of Counties County Climate Protection Program	Project to provide counties with best practices, tools and resources to assist them in developing and implementing successful climate change programs
Network of Regional Governments for Sustainable Development	International network of subnational regional governments based on partnerships and bilateral cooperation agreements among members
North South Climate Change Network	Network of an NGO, university, and local communities with the goal of improving Ontario's knowledge of, and response to climate change
Ontario-Quebec Provincial Cap-and-Trade Initiative	Inter-provincial cap-and-trade program (now folded into the Western Climate Initiative)
Regional Greenhouse Gas Initiative	Regional cap-and-trade program among Northeast and Mid-Atlantic states in the US
Renewable Energy and Energy Efficiency Partnership	International NGO that works in partnership with business, civil society, and government actors to reduce the barriers to the uptake of renewable energy and energy efficiency technologies and projects
Southwest Climate Change Initiative	Framework agreements between two Southwest US states to coordinate emissions reductions
The Climate Group	An independent, nonprofit organization dedicated to advancing business and government leadership on climate change
The Climate Registry	A collaboration between US states, Mexican and Canadian provinces, and Native American organizations aimed at developing and managing a consistent North American greenhouse gas emissions reporting system

Table 18A.1 (continued)

Experiment	Description
Transition Towns	Network/set of principles that encourages communities to “relocalize” all essential elements that the community needs to sustain itself
Union of the Baltic Cities Resolution on Climate Change	Resolution among Baltic cities to combat climate change and make plans for adaptation
US–China Memorandum of Understanding to Enhance Cooperation on Climate Change, Energy and the Environment	Bilateral Climate Change MOU between the US and China
US Conference of Mayors Climate Protection Agreement	Agreement by US Conference of Mayors to advance the goals of the Kyoto Protocol in the US
UK Bilateral Climate Change Agreements with US States	Formal agreements between UK government and various US states
West Coast Governors’ Global Warming Initiative	Collaboration between three Western US states that produced a set of recommendations on cooperative strategies
Western Climate Initiative	Network of states and provinces in the United States, Canada, and Mexico to cooperate on climate action and a regional cap-and-trade system
World Business Council for Sustainable Development	CEO-led, global association geared toward sharing of best practices and knowledge on climate change

Note: * See Hoffmann 2011 for an extended discussion of defining and identifying climate governance experiments. Given the nature of the search for eligible climate experiments I cannot and do not claim that this is the entire population or a representative sample of climate governance experiments. The search for governance experiments was bounded by language (mainly restricted to initiatives that have publicized their actions in English), access to the UNFCCC process, and media.

Source: Hoffmann 2011, Chapter 1. Websites from which the brief descriptions are drawn can be found in Hoffmann 2011.

Table 18A.2 Experimental activities

Activity		Number of experiments
1.	Catalogue emissions/undertake inventory	20
2.	Set targets/formulate action plan/do risk assessment	32
3.	Efficiency measures or offsetting	15
4.	Education/information and best-practice exchange/regular meetings	49
5.	Set certification standards/funding criteria	4
6.	Mandate emissions reductions	7
7.	Emissions trading	8
8.	Monitoring (of implementing actors)	16
9.	Enforcement	7
10.	Technology development	7

Source: Hoffmann 2011, Chapter 2.

19 Global cities and the politics of climate change

Harriet Bulkeley¹ and Heike Schroeder

One of the most significant trends within the body of work concerned with global environmental politics over the past decade has been the increasing recognition afforded to the multiple actors engaged in governing global environmental affairs at different sites and levels of political authority.² If a decade ago the taken-for-granted assumption was that global environmental politics happened somewhere that could be readily identified as a global political arena, work in the field has begun to challenge such an approach³ and opened up our understanding of the political spaces within which global environmental politics is taking place. Instrumental in this shift has been the increasing scholarship on the role of cities in the global environmental politics. As one of the most counterintuitive sites for the examination of global environmental politics, this research has sought to demonstrate the critical ways in which such issues, primarily climate change, are being governed in the urban arena. Through this body of work, two key issues have been explored. First, research has identified the transnational organization of urban responses to climate change as critical both in terms of understanding the emergent landscape of climate governance and in creating the capacity to act locally. The emergence of transnational municipal networks for climate governance has created new forms of political authority that are neither wholly public nor wholly private in character, and that raise significant questions concerning the ways in which state-based actors govern in the global polity.⁴ Second, scholarship has sought to understand how urban responses to climate change are taking place in individual cities, how urban responses are motivated and shaped by international politics and the multilevel dimensions to this politics, and the issues of institutional capacity and political economy that have enabled and constrained the emergence of mitigation and adaptation on the ground.⁵ While such analyses have frequently focused on one or two cases in detail, they provide potentially significant insights into the ways in which global environmental politics is structured within and through the urban arena, and of the challenges that governing climate change encounters when it “comes to ground.”⁶ It is these two dimensions – of transnational organization and of urban climate governance – that therefore provide the means through which to assess how the politics of global environmental affairs is being conducted at the city scale.

In this chapter, we provide an overview of these different dimensions of the urban politics of climate change and consider their implications for the broader field of global environmental politics. In so doing, however, we depart from previous analyses in one important respect. While research in this field has tended to focus on those cities which have exhibited political leadership regardless of their potential political and economic importance, or of their

¹ This chapter was written as part of the Urban Transitions project, a research fellowship sponsored by the UK's Economic and Social Research Council 2008-2012.

² Newell 2000; Hooghe and Marks 2003; Jagers and Striiple 2003; Bache and Flinders 2004; and Biermann 2010.

³ Bulkeley 2005; and Okereke et al. 2009.

⁴ Betsill and Bulkeley 2004; Toly 2008; and Kern and Bulkeley 2009.

⁵ Bulkeley and Betsill 2005; Schreurs 2008; and Bulkeley et al. 2011.

⁶ While et al. 2010, 86.

significance in terms of greenhouse gas (GHG) emissions or potential vulnerability to the impacts of climate change, here we examine these issues through the lens of global cities.⁷ While recent analyses have suggested that between 70 and 80 percent of anthropogenic emissions of global carbon dioxide emissions related to energy use may be attributed to urban areas,⁸ because of their population and levels of economic production, this contribution is concentrated in the world's largest cities. In 2010, the World Bank calculated that the "world's 50 largest cities, with more than 500 million people, generate about 2.6 billion tCO₂e annually, more than all countries, except the United States and China."⁹ While per capita levels of GHG emissions vary significantly between and within global cities, in relation to urban histories, economies and current levels of wealth and poverty, they nonetheless represent a very real concentration of future climate risk. At the same time, global cities can be particularly vulnerable to the effects of climate change. In the same report, the World Bank suggests that 15 "of the world's 20 megacities are at risk from rising sea levels and coastal surges" while growing concentrations of poor people in such cities also increases their potential vulnerability.¹⁰ Understanding how, why and with what implications such cities are seeking to respond to the issue of climate change is therefore critical to any study of the urban dimensions of global environmental politics.

Historically, such cities have played only a minimal role in the urban response to climate change, but this role is now changing significantly. In the rest of this chapter, we chart this response and offer some explanations for the emergence of global cities as key sites for the governing of climate change. In the first section, we examine the ways in which cities have organized transnationally to address climate change and the emergence of the C40 Climate Change Leadership Group as one means through which global cities have sought to mobilize on this issue in the past decade. We then turn to examine how and why global cities are engaging in urban climate governance, drawing on three case studies – London, Los Angeles, and Mexico City¹¹ – before concluding with some reflections on the implications of our analysis for the study of global environmental politics.

Building Urban Capacity: Municipal Voluntarism

The earliest urban responses to the issue of climate change emerged in Europe and North America in the late 1980s and early 1990s. One such initiative was the Urban CO₂ Reduction Project,¹² funded by the US Environmental Protection Agency, the City of Toronto, and several private foundations, with the aim of developing city-level plans and tools for the reduction of

⁷ Here we use the term "global cities" as shorthand for cities that are globally significant in terms of their population and economic and political activity, and whose actions materialize not only within but also beyond their city boundaries. This provides a surrogate for their potential environmental impact in terms of emissions of greenhouse gases and for the extent of lives, livelihoods, and assets at risk from the impacts of climate change. We do not use the term to classify cities in terms of their position in global hierarchies as, for example, in the work of Peter Taylor (2005).

⁸ Stern et al. 2006; and IEA 2008.

⁹ World Bank 2010, 16.

¹⁰ World Bank 2010, 8.

¹¹ The research upon which these case studies are based was funded by the UK Tyndall Centre for Climate Change Research as part of a wider project examining the role of non-nation-state actors in post-Kyoto international climate policy. We would like to thank the ESRC for their financial support for this work and the other members of this research team – Diana Liverman, Alex Haxeltine, Chuks Okereke, and Heather Lovell – for their contribution to our thinking in this area.

¹² Municipalities from North America and Europe participated in the Urban CO₂ Reduction Project including Ankara, Turkey; Bologna, Italy; Chula Vista, US; Copenhagen, Denmark; Miami-Dade County, US; Denver, US; Hanover,

GHG emissions.¹³ By the mid-1990s, three transnational municipal networks – ICLEI Cities for Climate Protection (CCP), Climate Alliance, and Energy Cities – had been formed, all of which were primarily focused on the reduction of GHG emissions. Interestingly, both the CCP program and the Climate Alliance were supported by municipal authorities in global cities – Toronto and Frankfurt, respectively – but across each of these networks municipal participants were drawn from a range of different cities and there was limited engagement from major centers of population, economic production, or political power.

This first wave of urban responses was typified by what might be termed “municipal voluntarism” – a focus on the voluntary activities of municipal authorities to build urban capacity to address climate change.¹⁴ Underpinning this approach was the belief that if cities represented part of the climate “problem,” in terms of their contribution to GHG emissions, then their policy mandates in critical areas such as land-use planning, transportation, waste, and in some cases energy meant that they could (and should) also be part of the “solution.” Cities were regarded as more dynamic and innovative, able to respond to this new challenge in ways that went beyond the agreements possible at national and international levels. In addition, the local democratic mandate of local governments, coupled with the growing phenomenon of partnership and public participation, meant that municipalities could be regarded as a means through which the wider involvement of local communities in responding to the issue might be mobilized.¹⁵

In this context, transnational municipal networks offered local governments a means of benchmarking their performance, of learning from the experiences of others, providing a sense of joint effort and of political kudos in being involved with something that went beyond their own boundaries and, in some cases, concrete resources in the form of advice, support, and finance. This model of transnational municipal governance was perhaps therefore most suited to those local governments with committed individuals and policy communities who could mobilize their influence to good effect internally, in effect becoming networks of leaders for leaders.¹⁶ The ethic of municipal cooperation upon which it is based perhaps sat rather more uneasily with the logics of economic competitiveness which drove many urban agendas in the global North in the 1990s, and the resources offered in terms of creating global links and networks could be regarded as less significant for global cities for whom other circuits of power, knowledge, and finance were more significant.¹⁷ Although membership of these networks increased steadily during the 1990s, and their geographical basis diversified to include municipalities in economies in transition and in the global South, the presence of global cities in these networks was still limited.

At the same time, while the approach advocated the need for an integrated, evidence-based approach to climate policy, this model met with significant challenges both in terms of institutional limitations and in the form of the political and economic realities of seeking to achieve significant change beyond the boundaries of the municipality itself. While some municipalities were able to develop sufficient capacity and political will to overcome such

Germany; Helsinki, Finland; Minneapolis St Paul, US; Portland, US; Saarbrücken, Germany; and Toronto and Metropolitan Toronto, Canada.

¹³ Bulkeley and Betsill 2003.

¹⁴ Bulkeley 2012.

¹⁵ For early case studies in this area, see, for example, Collier 1997; DeAngelo and Harvey 1998; Bulkeley and Betsill 2003; and Allman et al. 2004.

¹⁶ Kern and Bulkeley 2009.

¹⁷ Sassen 2001.

barriers, many witnessed a growing gap between the rhetoric of a need for an urgent response and the realities of governing climate change on the ground.

Building Global Impact: Strategic Urbanism

Just as it seemed that the interest in and momentum behind urban responses to climate change might be lagging, a new wave of engagement began. Growing international agreement about the importance of the issue combined with political recalcitrance at the national level in the US and Australia spurred a large number of municipal authorities in those countries to join existing programs. In the case of the US, a new municipal network was established in the form the US Mayors' Conference Climate Protection Agreement, which pledged to reduce GHG emissions in signatory cities by 7 percent below 1990 levels, in line with the US's Kyoto Protocol commitment.¹⁸ This approach of engaging locally elected politicians with the climate change agenda has been replicated globally, most recently with the launch in 2009 of the European Covenant of Mayors, which requires signatories to pledge to go beyond the EU target of reducing CO₂ emissions by 20 percent by 2020 through the formation and implementation of a sustainable energy action plan¹⁹ and in 2011 has more than two thousand members.²⁰ At the same time, municipal governments began to make their presence felt on the global stage. At the 2007 Bali meeting of the Conference of the Parties (CoP), the World Mayors and Local Governments Climate Protection Agreement was launched, which is a declaration by mayors and other elected leaders from local governments around the world to reduce GHG emissions by 60 percent from 1990 levels worldwide and by 80 percent from 1990 levels in industrialized countries by 2050,²¹ the 2006 recommendations of the Intergovernmental Panel on Climate Change which only made it into a footnote in the Bali Action Plan. Delegates from city governments were the second largest contingent at the Bali CoP, and at the 2009 Copenhagen CoP a dedicated Climate Summit for Mayors was held.

Alongside an increasingly overt political focus, the second wave of municipal engagement with climate change has been characterized by a growing interest among cities in the Global South and by an engagement with issues of adaptation. Central to this movement was the increasing engagement of global cities, for example in terms of the development of new networks, including the C40 Climate Change Leadership group, the emergence of climate change as an issue within the Metropolis network of the world's largest cities, and the growing engagement of these cities in other transnational networks. The growing political momentum behind climate action beyond the confines of the international arena combined with the development of new discourses aligning climate change with dominant urban concerns of economic and resource security has served to create a new rationale for urban climate governance, one which is based on *strategic urbanism*.²²

Of particular importance to this new movement has been the C40 network. Instigated by the then mayor of London, Ken Livingstone and his deputy, Nicky Gavron, together with The Climate Group, a not-for-profit organization based in London, the original C20 was formed by 18 cities in 2005 as a parallel initiative to the Group of Eight (G8) Gleneagles summit on climate change. In 2007, this network entered into a partnership with the Clinton Climate Initiative

¹⁸ Gore and Robinson 2009.

¹⁹ CoM 2011a.

²⁰ CoM 2011b.

²¹ See: <http://www.globalclimateagreement.org/>, accessed 12 April 2011.

²² Bulkeley 2012; see also Hodson and Marvin 2010.

(CCI) and expanded its membership to include 40 of the largest cities in the world, several of which were explicitly approached to become part of the network in order to provide the reach and degree of global engagement that the network was seeking. In a similar fashion to the CCP, Climate Alliance and Energy-Cities networks that have gone before it, C40 sets considerable store on sharing knowledge and experience, showcasing best practices, and providing resources for its members. By creating a climate “club” of globally significant cities within which to achieve this, the network also seeks to make a strategic claim for the importance of cities in addressing climate change, and in turn to use this positioning to gain political leverage of resources within particular national contexts:²³

The battle to prevent catastrophic climate change will be won or lost in our cities. The C40 Large Cities Climate Leadership Group is a group of the world’s leading cities committed to tackling climate change. We have already demonstrated leadership and concrete action on reducing greenhouse gas emissions, but on our own we can only go so far. [N]ational governments must *recognise the crucial role cities can play* in delivering national targets and stopping climate change.²⁴

In seeking to influence international and national climate policy, the C40 undertakes various advocacy roles, including profiling best urban practice, hosting events, and seeking to establish new norms concerning the significance of climate change for both economic development and resource security. In addition, and perhaps more significantly, the network has established a range of different schemes through which it seeks to govern its constituents. Drawing on links with The Climate Group provided the opportunity for engaging the CCI in a series of initiatives through which finance, knowledge, and further partners have been mobilized through the C40 network. Of particular importance in showing the concrete achievements that such a network can create has been the development of the Energy Efficiency Building Retrofit program which, as the CCI sets out: “brings together many of the world’s largest energy service companies, financial institutions, and cities in a landmark effort to reduce energy consumption in existing buildings across the municipal, private, commercial, educational, and public housing sectors.”²⁵

As Rutland and Aylett have argued, energy efficiency is a particularly powerful mobilizing device as it can “advance diverse (and often divergent) goals in tandem.”²⁶ So too in the case of the C40 network has energy efficiency proven to be an important means of translating diverse interests and materials into “mobile and loosely affiliated networks”²⁷ through which climate governance is taking place. Also significant have been two programs – Urban Life and Climate Positive – which have been orchestrated through partnership with the urban development company, ARUP, and designed to integrate climate change considerations into urban development “as usual.” In each of these cases, “the ‘power to’ do things is sustained through networked interaction; it is what enables the orchestration and co-ordination of action to take place along the length and breadth of the networks.”²⁸

The development and diversification of transnational municipal climate governance over the past decade, together with the emergence of a dedicated network for global cities in this arena, may be explained by two parallel trends. On the one hand, as Hoffman suggests, as the “mega-

²³ Hodson and Marvin 2009.

²⁴ C40 2011, original emphasis.

²⁵ CCI 2011.

²⁶ Rutland and Aylett 2008, 636.

²⁷ Rose and Miller 1992, 184.

²⁸ Allen 2010; see also Bulkeley and Schroeder forthcoming.

multilateralism” epitomized in the international climate negotiations falters, the opportunities created by the ongoing fragmentation of political authority is creating new forms of climate governance experiment.²⁹ The engagement of global cities with the climate change agenda can certainly be viewed in these terms; as such actors decry global inaction and seek to claim a space for their more agile approach:

there’s no point in waiting for national government, no point in waiting for Europe, no point in waiting for international agreements. Obviously they are important in the long term, [but] all that’s been far too slow ... you know we’ll all be dead by the time anything’s arrived.³⁰

On the other hand, authors have pointed to the growing strategic imperative for addressing climate change at the urban level. While et al. suggest that processes of eco-state restructuring are now focused on “carbon control,” creating a “distinctive political economy associated with climate mitigation in which discourses of climate change both open up, and necessitate an extension of, state intervention in the spheres of production and consumption.”³¹ Hodson and Marvin make a similar argument for the growing strategic importance of climate change in terms of ensuring resilient infrastructure and securing resources for economic development, particularly in the forms of energy and water, which in turn is leading to a distinct set of urban political economies orchestrated by and through the climate change issue.³² In this account, the new urban politics of climate change is being driven not only by shifts within the arena of global environmental politics, but also in relation to the changing nature of urban political economies and the flows of capital, carbon and resource upon which they depend.

Governing Climate Change in the Global City

Understanding the transnational governance of climate change through the urban lens therefore requires an engagement with how, why, and with what effect, urban actors are seeking to govern climate change in particular places. As we have outlined above,³³ a subtle, but nonetheless important, shift may be discernible in the ways in which transnational networks, municipal governments and other urban actors are seeking to govern climate change in cities. The limits of municipal capacity, the political economy of urban climate governance, the growing involvement of forms of private authority, the participation of cities in the global South, and the broadening of the agenda to include adaptation have all served to promote an alternative regime within which climate change is at once a more strategic concern and one which is more closely aligned to the concerns of urban growth and resource security that dominate urban agendas.³⁴

Rather than seeking to address their own GHG emissions, municipal authorities and other urban actors are increasingly seeking to engage in strategies, programs, and projects that address broader questions of urban adaptation and mitigation. This has entailed: engaging in forms of leadership that seek to promote the strategic importance of urban action, aligning other interests and laying claim to resources to this end; the development of specific initiatives and interventions aimed at providing alternative low carbon or resilient infrastructures; and a suite

²⁹ Hoffman 2011.

³⁰ Interviewee, London, 2008.

³¹ While et al. 2010, 82.

³² Hodson and Marvin 2009, 2010.

³³ See also Bulkeley 2012.

³⁴ Hodson and Marvin 2009, 2010.

of different approaches aimed at enabling others to act within these frameworks. In the rest of this chapter, we examine these approaches in three cities: London, Los Angeles, and Mexico City. We find broad similarities in their approaches, supporting the arguments presented above concerning the importance of the new urban politics of climate change.

London

As is clear from our discussion of the C40 above, London has been at the forefront of the recent engagement of global cities with the climate change agenda. A key issue for Mayor Livingston and Deputy Gavron, the creation of a climate change adaptation strategy and energy strategy in the first term of office (2000–04) provided the basis upon which to position climate change as a key priority during their second term of office (2004–08). The resulting Climate Change Action Plan contained the ambitious target “to stabilise CO₂ emissions in 2025 at 60 percent below 1990 levels, with steady progress towards this over the next 20 years.”³⁵ The requirement to produce such a strategy, covering both mitigation and adaptation, was at the same time placed on a statutory footing by the national government. In seeking to pursue this strategy, London’s international leadership of the C40 was cited as critical in gaining political kudos in an already crowded domestic landscape of progressive discourses concerning the need to act on the issue. In addition, London has drawn on business leadership in the arena of climate change to further support its strategies and plans. With respect to financial institutions, the City of London Corporation has played a role in developing and representing business interests in carbon markets. At the same time, through the inclusion of corporate actors in the different institutions and programs, including the London Climate Change Agency (2005–09), municipal authorities have sought to create a consensus between the public and private sectors about the urgency of the need to address climate change and the potential economic benefits of doing so.³⁶

Central to this discourse has been the need to create more efficient, and secure, infrastructure networks. At the heart of this approach, regarded as the “Mayor’s top priority for reducing carbon emissions” has been an ambitious goal to “enable a quarter of London’s energy supply to be moved off the grid and on to local, decentralised systems by 2025, with more than half of London’s energy being supplied in this way by 2050.”³⁷ Despite the change in London’s political leadership, this has given rise to the Decentralised Energy Masterplanning (DEMaP) Programme, whose ambition is to “to assist both public and private sector to identify Decentralised Energy (DE) opportunities in London” in order to meet the targets of decentralising supply.³⁸ At the same time, initiatives have been established which seek to enable businesses and householders in the city to address climate change, primarily through taking responsibility for conserving energy. For example, the Green500 scheme is a “carbon management service and a performance based awards scheme” aimed at the largest 500 organizations in London in which each member is “assigned a Carbon Mentor who will design a unique, holistic, carbon management plan” and carbon reduction target.³⁹ Another case is that of the Better Buildings Partnership, which seeks to draw together London’s leading commercial property owners and tenants in order to overcome barriers to the retrofit of office buildings. Established by the London Climate Change Agency (LCCA) and the City Corporation of

³⁵ GLA 2007, 19.

³⁶ Bulkeley and Schroeder forthcoming.

³⁷ GLA 2007, 105.

³⁸ LDA 2011.

³⁹ See <http://www.londonclimatechange.co.uk/greenorganisations/making-it-happen/green500/>.

London, current members include British Land, Grosvenor and Land Securities. At least one of the motivations behind the roll-out and adoption of such schemes is the EU Energy Performance in Buildings Directive, where buildings will be given energy performance labels. Equally important, however, was seen to be the rise of climate change on corporate social responsibility agendas. As one interviewee put it, “it doesn’t actually matter whether a board believes in climate change, ’cos climate change believes in them and they have no choice but to ensure that they are seen to be taking effective action on climate change.”

Los Angeles

Understanding the connections between climate change and the city’s resource security was perhaps the strongest driver for Los Angeles to take up leadership on climate change. Another strong driver was the necessity to invest in the city’s energy infrastructures. The way leadership was demonstrated by Mayor Antonio Villaraigosa was through setting an ambitious GHG reduction target of 35 percent of 1990 levels by 2030. At the time it was the most ambitious reduction target by a US city and stood in stark contrast to the level of inaction displayed by the federal government. The target is to be achieved through some 50 initiatives laid out in the city’s 2007 climate action plan, “Green LA: An Action Plan to Lead the Nation in Fighting Global Warming.” Two of the 50 actions are particularly key for understanding how Los Angeles is using climate change to promote an alternative urban regime and how it is approaching this in the context of broader questions of urban adaptation and mitigation, in particular resource security and urban growth.

First, Los Angeles needs to upgrade its energy supply infrastructure to meet growing future demands. The city government has decided to shift away from out-of-state coal imports to decentralized, renewable energy sourcing. The mayor is able to do this because the municipality owns and operates the city’s utility, the LA Department of Water and Power, which services all 4 million households with water and electricity and whose board is selected by the mayor and confirmed by the city council. A major source of GHG reductions is thus largely controlled by the mayor.⁴⁰ The city has set itself a renewable energy goal of 35 percent by 2020 with an interim goal of 20 percent by 2010, which it has achieved.

Second, Los Angeles needs to secure water for its growing population. In the words of a city government interviewee, “most importantly, I think for us, is the potential impact from climate change on water resources. We have an arid climate where the natural rainfall in Los Angeles would support a population about a tenth the size of Los Angeles. We import 85 percent of our water from Northern and Eastern California, from the Colorado River. So that scared the ‘you know what’ out of us”.⁴¹ The approach here again is to decrease dependence on resource import and the stated goal is to decrease per capita water use by 20 percent to eliminate the electricity needed for water supply and wastewater discharge by capturing storm water, adopting tiered water pricing, changing building codes and engaging in education and awareness building.

Mexico City

Mexico, considered as a developing country within the terms of the UN Framework Convention on Climate Change (UNFCCC), is not obligated under the Kyoto Protocol to limit its GHG emissions. Nonetheless, the municipal government of Mexico City has adopted a strategy and

⁴⁰ Schroeder and Bulkeley 2009.

⁴¹ Interviewee, Los Angeles, 2008.

a program to address its city-wide emissions – the metropolitan area of Mexico City accounting for some 60 million tons of GHG emissions annually.⁴² In 2004, it adopted its Local Strategy of Climate Action of Mexico City.⁴³ In 2008, it issued a Climate Action Program for 2008–12, also called Plan Verde, which includes some 26 actions targetting the energy, water, transport, and waste sectors. The aims are, first, to reduce GHG emissions by 12 percent or seven million tons during the 2008–12 period and, second, to build an integrated program for adapting to climate change in Mexico City by 2012.⁴⁴ The drivers behind these voluntary actions are the city's air pollution, congestion, water supply and waste problems, but also opportunities arising from the Kyoto Protocol's Clean Development Mechanism (CDM)⁴⁵ and transnational networks such as ICLEI.⁴⁶

Some of the actions included in the Climate Action Program have come on and off the agenda since the 1950s, such as reduction in water use and restoration and management of urban and rural micro-basins.⁴⁷ But also air quality improvement programs, such as PROAIRE II (2002–10) which includes over 80 measures such as restrictions on private car use and vehicle emissions certification, are forerunners of current climate actions (personal communications, April 2008). One of the better-known examples of initiatives in the transport sector in Mexico City is the Metrobus, which began operations in 2005. Mexico City received funds from the World Bank for this project to build a bus rapid transit system in order to reduce air pollution and congestion on one of the main traffic corridors of the city, the Avenida Insurgentes. By replacing some 380 buses and minibuses it reduces emissions by some 37,472 tonnes of CO₂eq./year.⁴⁸ The project is currently in validation for CDM accreditation.

A strong element of Mexico City's approach has been networking and exchange with other cities. According to SEMARNAT and INE "the exchange of experience within the framework of the activities conducted by ICLEI ... have been essential for Mexico City, as it was able to keep abreast of successful experiences around the world."⁴⁹ Mexico City benefitted from having "examples of what other cities were doing. In terms of Metrobus, of course, examples from Brazil and Colombia were very important. And the link with those cities was important."⁵⁰

Conclusions

The three case studies above demonstrate how climate change has the convening power to bring many different policy initiatives and objectives together; climate change is thus able to "advance diverse (and often divergent) goals in tandem."⁵¹ Urban concerns for economic and resource security are notable drivers for action on climate change within global cities, enabling urban actors to legitimate their investment in both mitigation and adaptation. In the case of London, motivation for climate mitigation governance is derived from international leadership opportunities, creation of carbon markets for London businesses and energy decentralization prospects. In Los Angeles, reducing vulnerability to climate change impacts and overhauling

⁴² Gobierno del Distrito Federal 2004; and Dodman 2009.

⁴³ Gobierno del Distrito Federal 2004.

⁴⁴ Gobierno del Distrito Federal 2008, 9.

⁴⁵ Gobierno del Distrito Federal 2004, 18.

⁴⁶ SEMARNAT and INE 2007, 165.

⁴⁷ Romero Lankao 2010, 172.

⁴⁸ SEMARNAT and INE 2007, 164.

⁴⁹ SEMARNAT and INE 2007, 165.

⁵⁰ Interviewee, Mexico City, April 2008.

⁵¹ Rutland and Aylett 2008, 636.

outdated energy infrastructures provide the impetus for action. Mexico City's approach to climate change governance is one of rebranding contentious political agendas around transport, water use and waste management and benefitting from capacity-building and infrastructure-funding opportunities through transnational networks and the CDM.

That issues of carbon control and resource security should feature so prominently on urban climate governance agendas is testament to the shift that has taken place in the urban politics of climate change over the past two decades. From occupying a position of marginal concern in a handful of municipalities, climate change is now regarded as a critical issue for many of the world's cities. This is a process that has been driven both transnationally, through the emergence and evolution of municipal climate networks, and within cities themselves, as the circuits of climate politics and carbon economies create opportunities, incentives and costs for urban authorities. The result is an increasingly shared rhetoric among (global) cities about the importance of addressing climate change in order to secure infrastructure and resources to sustain future economic growth.⁵² At the same time, however, it is possible to find the seeds of an alternative urban climate politics, one that frames the issue of climate change in relation to issues of social and environmental justice and at the same time which seeks to mobilize and empower communities. In London, for example, the Transition Town movement has sparked several groups each of which focus on the challenges of peak oil and climate change to promote a "relocalization" of the economy and new forms of community action and engagement. In Los Angeles, we find local community groups mobilizing around the issue of climate change to protect local green spaces and create alternative discourses about the ways in which water should be created, stored, and used in the city. A critical question for future research in this area therefore concerns how and why different kinds of climate politics come to dominate urban agendas, and the consequent implications for questions of social and environmental justice.

As we set out at the start of this chapter, scholarship on the role of cities in global environmental politics has been one important means through which conventional understandings of the relationship between the global, national, and local has been challenged. The growing work in this field continues to emphasize the importance of multilevel and multi-actor perspectives in capturing the diversity and dynamics of global environmental politics. It also raises further avenues for research. First, the interweaving of concerns for infrastructure, security, resources, economy, and climate change point to the need for work which moves beyond the explicitly "environmental" spheres of global politics to consider how such issues are orchestrated through other arenas. Second, by demonstrating the multiple sites and means through which politics is enacted in the city – here, for example, including bus rides in Mexico, the turning of a tap in Los Angeles, the siting of a new development in London – it raises questions concerning where we might draw the boundaries of the political and the theoretical lenses through which we might do so. Engaging with the city, we can see how global environmental politics become part of the fabric of everyday life, and so too how our potential is both made, and lost, in the urban arena.

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⁵² Hodson and Marvin 2009, 2010.

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PART IV

THE POLITICAL ECONOMY OF GOVERNANCE

20 The political ecology of globalization

Peter Newell

This chapter seeks to contribute to debates about globalization and the environment by showing how the social forces that are central to contemporary capitalist globalization are also decisive shapers of environmental outcomes. The primacy of intensifying accumulation on a global scale creates critical ecological and political challenges, notably whether viable accumulation strategies can be identified that are less resource intensive or may even profit from reduced resource use, or whether environmental problems such as climate change create a crisis of capitalism because of its inability to respect ecological limits to growth.¹ This context is critical for understanding the “nature” and conduct of global environmental politics and the effectiveness of existing structures of global environmental governance. More specifically, it affects our understanding of whether such structures are capable of reshaping the global economy and steering it onto a more sustainable footing, or whether their role is more likely to advance and deepen capitalist globalization.

In such a rendition, global environmental governance, understood conventionally as what international environmental regimes do, is dislodged from a position of primacy in the analysis in favor of an account that attempts to “read” ecologically and socially the organization of the global political economy: the relations of power that create and sustain it and the ecological and social consequences of this way of ordering things. While such an account has implications for the orthodox study of global environmental governance since it problematizes liberal understandings of the state and the role of (international) law, its main focus is the relationship between capitalism and ecology: a relationship that international institutions and powerful states within them mediate in important ways, but which requires an analytical focus that goes beyond that.²

This chapter argues first that since many aspects of (global) environmental change are produced by economic and social forces associated with contemporary capitalism, we need to develop an understanding of global environmental politics in which attempts to construct forms of global environmental governance are placed within the historical context in which they develop and the social and economic forces which shape (and are shaped by) the context within which cooperation and change is (or is not) possible, are taken seriously.³ This is crucial to understanding the sources of environmental change and the possibilities of containing or reversing it given the prevailing organization of power and distribution of resources in the global system.

Second, the claim is made that such an understanding can be enriched and enhanced by combining insights from critical (international) political economy with an extensive body of work on “political ecology.” This work explicitly seeks to explain environmental politics, often understood as struggles over access to (natural) resources, as a function of the social relations

¹ Kovel 2007; Magdoff and Bellamy Foster 2010; and Newell and Paterson 2010.

² Newell 2011.

³ Newell 2008.

that structure issues of access, property, entitlement, and justice. The political ecology tradition is hugely eclectic, including feminist political ecology, cultural political ecology and post-structuralist accounts alongside work within a political economy tradition.⁴ While traditionally focused on particular sites of struggle, a (return to) global political ecology is increasingly apparent which enables the sorts of cross-scalar, multi-site analysis that are critical to understanding the drivers and impacts of global environmental change and the drivers and impacts of attempts to manage that change through institutions of global environmental governance.⁵ Here it is argued that historical materialist lines of enquiry are particularly well placed to connect a macro understanding of social forces in global politics with micro and site-specific manifestations of this organization of power which political ecologists document with such rigor.⁶ The fusion of insights from these distinct, but related, theoretical traditions offers the possibility of reading contemporary capitalism (globalization) ecologically: capturing the nature of its material flows and their social and environmental consequences, and so gives as a more wide-ranging, multidimensional and multiscalar account of the everyday conduct of global environmental politics than global attempts to construct law around specific transborder effects of production (rather than regulate the sources of them).

Which Globalization?

The historical context which this chapter describes is the current neoliberal order that has emerged from the late 1970s onwards, but whose project of monetary discipline and global integration has deepened and intensified during the 1980s and 1990s.⁷ It refers, for example, to attempts to re-scale accumulation opportunities through bilateral, regional and global trade and investment agreements, state restructuring, privatization, and the use of monetary policy and enhanced capital mobility. Within this there are specific features of the organization of the existing global political economy that are of particular significance for understandings of the potential and limits of global environmental governance. These include the power and mobility of finance capital which has enabled the financialization of environmental services,⁸ the critical though schizophrenic attitude toward the role of the state and regulation, particularly on the part of states in the “Lockean heartland”⁹ which has left us with the plural but uneven ensemble of public and private institutions and initiatives that we have aimed at de-regulating public, and re-regulating through private means, different sectors of the economy, and the creation of new sites of accumulation to overcome the limits to capital: crises of overproduction and underconsumption.¹⁰

This context has shaped the willingness and, to some extent, ability of states to create forms of environmental regulation threatening to powerful fractions of capital amid fears of pollution flight and carbon leakage. Whether a race to the bottom, top, or to the middle is the appropriate term, or whether regulatory chill is a more accurate term,¹¹ depends very much on the country and sector in question and the degree of autonomy or “developmental space” they have to assert conditions on powerful investors.¹² The threat of capital flight, nonetheless, is a powerful

⁴ Blaikie 1985; Rocheleau et al. 1996; Stott and Sullivan 2000; and Forsyth 2003.

⁵ Carmin and Agyeman 2011; and Peet et al. 2011.

⁶ Mann 2009.

⁷ Harvey 2005.

⁸ Newell and Paterson 2010.

⁹ Van der Pijl 1998.

¹⁰ Harvey 2010.

¹¹ Vogel 1997; and Neumayer 2001.

¹² Gallagher 2005.

weapon in the armoury of corporations wishing to check more stringent environmental regulations, and one many governments take extremely seriously and invoke themselves as a rationale for not imposing costs on their businesses which surpass those required of their competitors. It features prominently, for example, in efforts to check initiatives by activists to see new rules and regulations to govern the social and environmental behavior of transnational corporations operating overseas.¹³ Instead, we have seen a growth of self and private regulation which confers on leading business actors, principally transnational companies, the power (and authority) to establish their own rules of conduct and restraint in a more open (for some) global economy.¹⁴ Much of the proliferation of voluntary regulation through the negotiation of codes of conduct and certification schemes can be understood as an attempt to respond to popular anxieties about the ability of corporations to exploit lower social and environmental standards in a more open global economy and offers a concrete and visible way of taking action while not accommodating more critical demands for tougher forms of social and environmental regulation.

Beyond the question of governing globalization, what is interesting in environmental terms is the coincidence of early twenty-first-century capitalism with a growing realization that the energy base upon which modern capitalism has been built is unsustainable, whether because of scarcity induced by peak oil, concerns about climate change, or a questioning of the social costs of imperial ventures to provide energy security. In this context, a set of economic strategies predicated on the movement of goods and services over ever longer distances starts to look vulnerable. Pressures to account for carbon footprints and reduce “food miles” express anxiety about the environmental consequences of more globalized circuits of production and consumption. Indeed, half of all emissions of carbon released into the atmosphere from the burning of fossil fuels and cement production have occurred since the mid-1970s.¹⁵ Then there are the unforeseen boomerang effects that reverberate around the global economy when the needs of food, energy, and water compete and conspire to produce tension and crisis. The drive in the US for biofuels as a solution to an energy crisis which pushes up the price of corn resulting in “tortilla riots” in Mexico; the drives toward land-grabs in countries such as Ethiopia and Sudan to secure future supplies of water and food for rapidly expanding economies, anticipating the exhaustion of their own resource bases, create new vulnerabilities at the very moment that they appear to provide a measure of resource security. As Harvey and many others have pointed out, capitalism does not resolve its crises, it merely moves them around.¹⁶

These issues raise the question of capitalism’s relationship to fossil fuels. Clearly much of the history of the expansion of capitalism can be told through war, conquest, colonialism, and accumulation through dispossession. The pursuit of oil and coal in particular¹⁷ has been decisive in the making of British and American power¹⁸ and in fueling the industrial revolution. The need to secure reliable and affordable supplies of energy continues to be a significant shaper of foreign policy as any number of imperial ventures in the Middle East and elsewhere testify.¹⁹ The question is whether in an age of “peak oil” and climate change, a different type of

¹³ Newell 2001.

¹⁴ Lipschutz with Rowe 2005.

¹⁵ Peet et al. 2011, 22.

¹⁶ Harvey 2010.

¹⁷ Freese 2003; and Kaldor et al. 2007.

¹⁸ Rupert 1995.

¹⁹ Rees 2001.

capitalism can emerge to drive large-scale investments in “clean” energy and related energy services²⁰ or whether climate change reflects a “crisis of the capitalist mode of production” as writers such as Brunnengräber claim²¹ or, as Huber suggests, that “fossil fuels represent an historically specific and internally necessary aspect of the capitalist mode of production.”²² In other words can there be capitalism that is not “fossil capitalism”²³ and can we imagine a world beyond “hydro-carbon civilization”?²⁴

Capitalism is nothing if not resilient and adaptable, revolutionizing forms of production in restless waves of innovation. As Marx and Engels famously stated, the bourgeoisie “cannot exist without constantly revolutionizing the means of production.”²⁵ While certain “base technologies”²⁶ may characterize eras of capitalism, as Buck notes, it is important not to “confuse particular manifestations of capitalism – that is, particular historical social formations – with capitalism itself, thus under-estimating the flexibility of the beast.”²⁷ Even a post-oil economy, he argues, would be a capitalist one as long as there is an industrial reserve army without ownership or control of the means of production and as long as the production of commodities by commodities prevails. Hence, even peak oil can be reworked as an opportunity for growth where fossil fuels can be replaced by a “solar revolution.”²⁸ Technological dynamism is at the heart of capitalism, and as a consequence, its technological trajectories are not necessarily set in stone. “Capital, as value in motion, does not care about what it makes, the machinery used or the motive source. It cares only about its own self-expansion and valorization,” Buck claims.²⁹ These are the incessant waves of creative destruction that some argue might yet be harnessed toward the goal of a low carbon economy.³⁰

One area where from whence this momentum may derive is finance capital’s sensitivity to risk. Environmental activists have long targetted investment banks and insurance companies as powerful actors that wield significant influence over governments as well as the businesses that rely on them for capital. Greenpeace sought to work with the insurance and re-insurance industry exposed to large pay-outs as a result of “natural” disasters to encourage them to disinvest from fossil-fuel investments,³¹ while other activists have pressured leading investment banks to screen their portfolios for large fossil-fuel projects which run the risk of attracting negative publicity and diminishing shareholder value.³² While such strategies have, on occasion, enjoyed a limited degree of success, the question remains whether finance capital can afford to be indifferent to the fate of fossil-fuel industries and their dependents. It is important not to exaggerate the autonomy of financial from productive capital. After all banks and insurance companies have to have something to invest in. It is also the case that many CEOs and shareholders are rewarded with stock options tying their fate to the fortunes of the financial markets as increasing the price of stock itself becomes

²⁰ Newell and Paterson 2010.

²¹ Brunnengräber 2006, 219.

²² Huber 2008.

²³ Altvater 2006.

²⁴ Peet et al. 2011, 10.

²⁵ Marx and Engels 1998, 38.

²⁶ Storper and Walker 1989.

²⁷ Buck 2006, 60.

²⁸ Altvater 2006, 53.

²⁹ Buck 2006, 63.

³⁰ Derber 2010.

³¹ Paterson 2001a.

³² Newell 2008.

an objective of the corporation.³³ With the structures of regulation, tax, and subsidies that we currently have, fossil fuels, despite clear evidence of the environmental problems they generate, continue to be systematically privileged by state managers and therefore continue to offer highly profitable returns. This explains why, despite efforts of oil companies to re-brand themselves as “Beyond Petroleum” in the case of British Petroleum, or to dissociate themselves from business organizations that are openly hostile about the case for action on climate change, they continue to invest in highly destructive but highly lucrative investments such as the oil tar sands in Alberta Canada.

Overproduction of course necessitates overconsumption. One of the most indelible features of the global capitalist economy over the last 40 years has been the exponential increase in mass consumption that has been achieved through advertising and marketing strategies and the internationalization of production and transport networks, fueled until now by cheap and abundant energy supplies. The “shadows of consumption” that are left behind leave a trail of destruction, however.³⁴ The changing geographies of production and consumption mirror closely the shifting profile and intensifying nature of pollution. The simultaneous de-industrialization of wealthier countries and industrialization of poorer ones, a strategy aimed at overcoming the power of unions to insist on higher wages and creating a new international division of labor, has meant that countries such as China, India, Brazil, and South Africa have seen their contributions to global problems such as climate change increase significantly. China’s CO₂ emissions amounted to 407 million tonnes in 1980 and 1,665 million tonnes in 2006, while India’s went from 95 million tonnes in 1980 to 411 million tonnes in the same period.³⁵ The final destination for many of the goods produced during this surge of industrialization remains the rich West. Forty percent of China’s product is exported as is 20 percent of India’s,³⁶ raising the question of “embedded carbon” and who is responsible for the pollution embodied in the products that flow through the veins of the global economy.

The distribution of wealth and waste generated by this frenetic intensification of economic activity has been unevenly distributed, reflecting and exacerbating existing inequalities along the lines of class, race and gender as a vast literature on environmental justice has documented in detail.³⁷ Whether it is toxic, plastic or the sorts of e-waste (computers and the like) that ends up on landfill sites in Ghana,³⁸ global accumulation strategies enabled by trade and investment agreements create greater distance between sites of production and sites of consumption but also allow for “spatial fixes”³⁹ for the need to privatize gain and socialize risk and the externalities of production in sites, within and between societies, where opposition is weak and regulation either non-existent or weakly enforced. This dynamic is visible not just in relation to waste, but also through the commodification of carbon in offset markets that provide a spatial fix (and a temporal one by discounting the future) by displacing carbon reduction efforts to areas of the world where it can be done more cost-effectively.⁴⁰ It is a function, in many ways, of the triumph of efficiency over equity as the primary organizing principle in neoliberal environmental governance.

³³ Peet et al. 2011, 21.

³⁴ Dauvergne 2008.

³⁵ Peet et al. 2011, 21.

³⁶ Peet et al. 2011, 22.

³⁷ Pellow and Park 2002; and Newell 2005, 2006.

³⁸ Carmin and Agyeman 2011.

³⁹ Harvey 1981.

⁴⁰ Bumpus and Liverman 2008.

These then are just some of the ways in which capitalism's relationship to nature has evolved in the context of globalization. They suggest shifting alignments of power in the relationship between state and capital, though notably not a "hollowing-out" or "retreat" of the state in most areas of the world, or in areas of policy of most significance to the environment as has been claimed for other areas of policy.⁴¹ They point rather to a reconstitution of power whereby some parts of the state have internationalized, becoming embedded within, and responding to, the preferences of a transnational capitalist class, such as ministries of trade and finance, while others have diminished in importance, such as ministries of labor, grounded in social forces that have lost power and that exercise less structural influence in conditions of globalization.⁴² They suggest a delegation of regulatory power to market actors to establish appropriate forms of labeling and certification and a strong preference for regulation *for* business than *of* business, one that can be traced through the history of failed and half-hearted attempts at business regulation and the simultaneous rise of trade and investment agreements that grant new powers to transnational corporations over states,⁴³ a manifestation of what Gill refers to as the "new constitutionalism."⁴⁴ The forms of globalization described here reflect the preferences and political project of a capitalist class which includes "globalising state bureaucrats"⁴⁵ and the business interests that they represent and seek to serve based in the epicenters of the world economy.

The landscape described here also reveals the ways in which strategies for responding to environmental crises have been aligned with the imperatives of capital accumulation. Whether it be the marketization of environmental governance and the preference for market-based over so-called "command and control" solutions, the rise of payments for ecosystem services approaches to conservation or the commodification of water, forests and carbon as responses to environmental problems, dominant responses serve to entrench capitalism rather than respond to the need for structural reform in advanced capitalist economies demanded by environmental crises. Problems generated by overconsumption of resources, such as fossil fuels, become an investment opportunity to buy and sell "offsets" which allow companies and individuals to purchase emissions reduction opportunities in the developing world and claim them as part of their own emissions reductions efforts, all the while keeping existing structures of production and consumption intact. Water scarcity is regarded as a problem produced by inefficient state institutions and a failure to incentivize conservation by allocating property rights. Privatization becomes the obvious solution. The 2003 World Bank World Development Report on "Sustainable Development in a Dynamic Economy" advances the idea that the spectacular failure to tackle poverty and environmental degradation over the last decade is due to a failure of governance, "poor implementation and not poor vision." The report notes, "Those [poverty and environmental problems] that can be coordinated through markets have typically done well; those that have not fared well include many for which the market could be made to work as a coordinator." The challenge for governments is therefore to be more welcoming of private actors through, among other things, "a smooth evolution of property rights from communal to private."⁴⁶

⁴¹ Strange 1996.

⁴² Sklair 2002.

⁴³ Muchlinski 1999; and Newell 2001.

⁴⁴ Gill 2002, 47.

⁴⁵ Breslin 2003.

⁴⁶ World Bank 2003, 3.22.

So far the story of globalization and its relationship to environmental governance could be told through critical international political economy (IPE) accounts drawing on historical materialist analysis of (global) environmental politics⁴⁷ and broader bodies of critical scholarship on globalization and capitalism which usefully draw attention to the social forces underpinning the project of globalization, understood as the deepening, intensification and re-scaling of capitalism.⁴⁸ What is missing from such an account, however, is evidence of the social and environmental consequences of a global economy organized in this way and premised upon these relations of power. This is where I argue that work on political ecology can make a useful contribution, balancing the macro focus of critical IPE and grounding our analysis of the “socio-natures”⁴⁹ that produce and are produced by globalization.

Which Political Ecology?

What is political ecology and why does it help us to understand the relationship between globalization and the environment? At its broadest, political ecology seeks to provide a framework for understanding human-society or “socio-natural” relations.⁵⁰ More specifically, it examines the interrelations of politics and power, structures, and discourses with the environment. Here I highlight those elements which offer a bridge to IPE and critical traditions within global environmental politics (GEP):⁵¹ materialist political ecologies that posit linkages between ecologies and the economies of which they are a part. For example, the global political ecology that Peet et al. engage in “emphasises global political economy as a main causal theme.”⁵² For them

Political ecology is predicated on an ecologically conceptualised view of politics: it is attentive to the hard edges of capitalist accumulation and global flows of labour, capital and information, but also attuned to the complex operations of power-knowledge ... all within a system prone to political-economic crisis.⁵³

It is a research agenda that coalesces around the impact of capitalist development on the environment, the social and political implications of environmental protection and management, and the political economy of the way “new natures” are produced. Such lines of enquiry have been pursued through work on the practices of commodification of “neoliberal natures,”⁵⁴ as well as “classic” political ecology concerns around questions of access to material and natural resources, and issues of resistance, equity and justice in the negotiation and distribution of social and environmental benefits at multiple scales.⁵⁵

One strand of political ecology that developed in the wake of, and by way of response to, the Rio Earth summit in 1992 was that associated with the work of Wolfgang Sachs, Nicolas Hildyard, Vandana Shiva and others, which perhaps resonates most directly with the traditional preoccupations of international relations scholars.⁵⁶ Critical of the contents of the Rio agenda,

⁴⁷ Gale and M’Gonigle 2000; and Levy and Newell 2005.

⁴⁸ Gill 2002; Sklair 2002; and Robinson 2004.

⁴⁹ Castree and Braun 2001.

⁵⁰ Robbins 2004.

⁵¹ Saurin 2001; Paterson 2001b; and Newell 2008.

⁵² Peet et al. 2011, 23.

⁵³ Peet et al. 2011, 23.

⁵⁴ Castree 2003, 2008; Budds 2004; Mansfield 2004, 2007; and Bakker 2005.

⁵⁵ Peluso 1992; Bryant and Bailey 1997; Paulson et al. 2003; and Zimmerer and Bassett 2003.

⁵⁶ Sachs 1993.

particularly what went “unsaid at UNCED” in terms of the role of militarism, debt and consumption in driving environmental degradation, and the actors that had secured for themselves a place at the negotiating table in deciding appropriate forms of global managerial action while deflecting attention away from their own implication in accelerating ecological crisis,⁵⁷ this work provided a powerful and timely antidote to the optimism and faith placed in the institutions of global governance to deliver effective environmental and development outcomes. It was critical of “the aspirations of a rising ecocracy to manage nature and regulate people worldwide,” “largely devoid of any consideration of power relations, cultural authenticity and moral choice.”⁵⁸

But there is actually a much longer lineage of work on political ecology, which is “global,” less in the *spatial* sense of privileging global institutions as the site of enquiry and the location of politics and more in a *causal* sense by exploring the ways in which particular ecologies and the social relations in which they are embedded are a product of broader social relations, particularly class relations. Piers Blaikie’s work was particularly pioneering in this sense combining “the concerns of ecology and a broadly defined political economy”:⁵⁹ studying, for example, how the nature of social erosion in Nepal could be usefully understood in relation to the global capitalist political economy.⁶⁰ Other work on metabolism, metabolic rifts⁶¹ and entropy,⁶² drawing on Marx, on ecology and on ecological economics is also useful here for its attention to ecological and energy flows in a way which is not bound by ontologies which privilege the state or international institutions as “units” of analysis. Instead the focus is on mapping and accounting for “ecologically unequal exchange,”⁶³ the social roots of global environmental change⁶⁴ or the points of tension between how ecological systems operate and how capitalism functions. Such work provides us with an invaluable account of the (economic) *causes* of global environmental change.

But it also affords insights into how the expansion of capitalist logics under globalization and their extension to the environmental realm has intensified conflicts over natural resources and how they are valued.⁶⁵ Studies on resistance to extraction, commodification, and privatization of resources⁶⁶ on the part of marginalized groups reveal the specific social and site specific ecological consequences of attempts to open up mining, forestry, and water to private investors.⁶⁷ Increasingly, attention is also being paid to the “local” social and environmental consequences of market-based initiatives deriving from global environmental institutions, whether it is the Clean Development Mechanism (CDM), REDD (Reduced Emissions from Deforestation and Forest Degradation), or conservation efforts centered around payments for ecosystem services.⁶⁸ This complements work on the activities of key neoliberal economic institutions such as the World Bank as well as on environmental bodies such as the Global Environment Facility.⁶⁹ Because issues of access, property rights and livelihoods are

⁵⁷ Chatterjee and Finger 1994; and Thomas 1996.

⁵⁸ Sachs 1993, xv.

⁵⁹ Blaikie and Brookfield 1987, 17.

⁶⁰ Blaikie 1985.

⁶¹ Clarke and York 2005; and Burkett and Bellamy Foster 2006.

⁶² Altvater 2006.

⁶³ Martinez-Alier 2007.

⁶⁴ Roberts et al. 2003.

⁶⁵ Martinez-Alier 2002.

⁶⁶ Goldman 1998.

⁶⁷ Newell 2007.

⁶⁸ Bachram 2004; Brockington and Igoe 2006; Lohmann 2006; and Adams and Hutton 2007.

⁶⁹ Young 2002; and Goldman 2005.

affected by and enrolled in global circuits of capital, political ecology provides useful ways of identifying and tracing the social and environmental consequences of neoliberal forms of environmental governance. This contributes to lines of enquiry aimed at understanding who wins and who loses from particular (global) environmental governance arrangements.⁷⁰

Given that site- and resource-specific conflicts increasingly result from and are embedded with “global” configurations of politics and social forces, strands of critical IPE usefully connect with “local” political ecologies, to show how broader structures of power are reproduced and present in struggles around natural resources which often embody inequalities based on class, race, or gender.⁷¹ The globalizing reach of international regimes and their role in creating markets in, and determining access to, resources as crucial as water, energy, and seeds means that critical accounts of global environmental governance have to widen their analysis beyond the “international” level and beyond conventional theoretical foci to comprehend how the structures of power which shape and circumscribe “global” environmental governance may also configure “local” sites of resource governance. The dynamic also runs the other way. These sites, in turn, impact upon global regimes through the value they create or fail to produce as commodities to be exchanged on global markets (in the form of certified emissions reductions, for example) or the symbolic value rested in them as examples of successful projects (that bring “co-benefits” to communities beyond their value as a commodity), or because of the controversy generated through acts of resistance by affected communities and social movements.

Political ecology’s focus on material, institutional, and discursive practices of power complements in many ways neo-Gramscian framings of power in GEP which illustrate how governance arrangements often serve to globalize particular sets of material and political interests.⁷² As with all hegemonic projects, however, for the sorts of solutions to problems of global environmental change promoted by global institutions to maintain their “common-sense” status, strategies of accommodation are required to bring on board critics and make concessions in the name of preserving the power of an historic bloc. Hegemony is never complete and acts of resistance serve to remake them, producing legitimacy crises that their advocates then have to address. We see this clearly in both the governance reforms taking place within the CDM and the standards created in voluntary carbon markets aimed at tackling instances of climate fraud and double-counting of carbon credits exposed by activists, so as to contain threats to the credibility of the market as a whole.⁷³ Studies within political ecology also draw attention to the ways in which globalizing projects are resisted and rejected, or “reworked” into more positive local impacts. For example, how people create opportunities within the global carbon economy by “manoeuvring through and finding spaces at the interstices of the same political economy that in other ways simultaneously constrains and structures their agency.”⁷⁴

Conclusions

Contrary to much conventional analysis, it is suggested here that globalization is most usefully understood as a political and economic project, often incoherent and unevenly clearly applied, but one which seeks to overcome limits to capital accumulation by opening up markets through new suites of trade and investment agreements, securing property rights for investors and

⁷⁰ Newell 2008.

⁷¹ Blaikie 1985; Blaikie and Brookfield 1987; and Peet and Watts 2004.

⁷² Levy and Newell 2002; and Mann 2009.

⁷³ Newell and Paterson 2010.

⁷⁴ Bebbington 2003, 300.

constructing institutions able to lock in an integrated global economy on terms set by its most powerful actors. This produces a range of environmental as well as social challenges that require theorists and practitioners to find analytical tools and resources that allow us to make sense of what is going on, on whose behalf and with what consequences. It has been suggested here that attempting to read globalization “ecologically” through the use of a diverse and eclectic set of work that falls under the umbrella of political ecology provides a useful starting point in this endeavor that complements insights gleaned from critical IPE and GEP. This is so because of political ecology’s explicit attempt to link ecological concerns with political economy, because of its attention to the way in which social relations produce and reflect different “socio-natures” and because of its lack of respect for analytical categories and distinctions that prevent us from capturing trans-scalar political, economic, and ecological dynamics that help to explain both the causes of global environmental change as well as the context in which they are being addressed by states, international institutions and a multitude of other actors trying to steer globalization in a more ecologically stable and socially responsible direction.

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21 Exploring global governance from a critical global political economy perspective

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The starting point of my argument put forward in this chapter is situated in the discipline of international relations (IR) and the place of global environmental politics (GEP) within it. Both the discourses on global governance (GG) and on GEP (as well as on global environmental governance: GEG) generally pay little attention to the unequal distribution of resources (or at least not as a main or guiding principle) and of unequal consumption patterns – nor do they include the notion of “giving up,” consuming less or sacrificing something for better governance or for environmental improvement. This normative concern is not within the parameters of the issue area of the mainstream discipline. There are several reasons why this is the case and they will be discussed here. The main concern of this chapter is to discuss how GEG and considerations of consumption but also of global equity need to be brought together and how the one needs to consider the other for a more normative GEG discourse – but also one that takes into consideration issues that most environmental writers agree need to be at the forefront of political concerns in the twenty-first century.

First of all, both GEP and GG are primarily concerned with the relations between political actors and the structure within which they operate. They see institutions as the main social force both as causes of change and as prescriptions for solving problems.¹ But as Haas² puts it:

What is needed is a clearer map of the actual division of labor between governments, NGOs, the private sector, scientific networks and international institutions in the performance of various functions of governance. Also needed is an assessment of ... how well they actually perform these activities.

They are not primarily concerned with the improvement of the problem studied except as a political, institutional, or a policy issue. Thus, the research focus as well as the normative element of GG and mainstream GEP are fundamentally different from the recent literature on consumption or on political ecology because their research concern is different. A social or emancipatory concern as a subject matter would be fundamentally normative and more of the domain of critical approaches since it pushes the boundaries from a normative, conceptual, and methodological perspective.

The connection between critical thought and environment is of course hardly new. Although in GEP, hardly any postmodern or poststructuralist literature is available (the main exception being Simon Dalby), there is a solid core of material that can trace its origins to Marxist thought in some form or manner.³ In contrast, many environmental theories have a view of the environment as a cornucopia or see technological solutions that will improve environmental

¹ Young 2002, 3; and Young, Schroeder and King 2008.

² Haas 2004, 8.

³ Merchant 1992, 1996; Saurin 1994; Paterson 2001; and Lipschutz 2003.

degradation (see environmental modernization, or again, institutionalist approaches). Environmental degradation and social injustice or unequal distribution of resources or profligate use of resources are therefore not seen as issues except by a relatively small number of authors such as Ronnie Lipschutz, Ken Conca, Thomas Princen, Michael Maniates, and Peter Jacques to name but a few. In fact, warnings of the finite nature of resources and sinks are seen as thoroughly discredited after the Club of Rome and the environmental movement's warnings in the 1970s. Bjørn Lomborg's work⁴ or the world economic forecasts that suggest that there is no resource shortage undermine warnings of consumption and sacrifice is another example of such an approach. It is not within the scope of this chapter to critique these perspectives except to question the assumption that technology without structural change can solve the environmental crisis and this will be addressed below.

The focus on institutionalist approaches, discourses, and views explains why a focus on environment–society relations, consumption, and equity has not made it into mainstream debates so far. However, for those who have been following the debates on consumption, equity, normative issues or critical analyses of the roles of certain actors that have taken place within the International Studies Association in the past few years, it is obvious that not all is well and that the discipline of GEP in some ways has reached a chasm. There is a canon that is firmly anchored in the study of GG issues which is a revised and improved concept of what used to be regime theoretical approaches. Then there is a group of scholars who are moving away from, or were never close to, this kind of approach and their focus is on alternative ways to find environmental improvement at the global level. This kind of work can be structural, actor focused, dealing with the micro level and its relevance to the macro, with connections within the global political economy (GPE) or normative. However, there is a “disconnect” between these two ways of studying GEP and there does not seem to be a movement to create overlaps or dialog except through the study of global civil society.

There are two reasons for this and they have to do with the focus on mainstream institutions. This focus captures a large but not the whole part of the GPE and global political ecology. By widening the focus, a dramatically different picture emerges and attention is drawn to different conceptualizations of the problem which are neglected in the institutional view. First, there is growing awareness of the issue of consumption as a distribution issue in GEP or GG among the second group of scholars which is not recognized by the first, the institutionalists. We have seen the addition of social movements and corporations to the role of the state as primary actors in the international system in the past 15 years or so. In fact, this analysis of transnational actors has been incorporated into neoliberal institutionalism and has been one of the areas that has enriched and contributed to the literature on neoliberal institutionalism. In many ways, the role of global civil society has been overemphasized in global processes. There are many successful examples of the workings of global civil society and its reformative or even emancipatory character. However, there are equally many regions in the world where global civil society formation has not been as successful and these cases have been neglected.

Second, there is the understanding that we are not dealing with an ever increasing or at least stable amount of resource and sink capacity on this planet. Some resources are infinite, others are not. Clearly, for a sustainable future, the pressure on resources and sinks needs to ease up. At the same time, resources and access to resources needs to be divided up differently to provide

⁴ Lomborg 2001.

access to those who have been excluded from the benefits of globalization and clearly the liberal principles underlying the main global institutions support this reading – at least in theory. Clearly modern technology or ecological modernization can provide us with the tools to achieve this but it does not supply the distribution mechanisms to provide more equal access to resources and sinks. Recent technological developments have shown that the availability of more sustainable technology alone is not enough in achieving more equity and sustainability or eradicating poverty because the cost and access to such technologies makes it unattainable to the majority of people who need it most. Some would go much further, as, for example, David Harvey who argues that the current international or global system can only be described as “accumulation by dispossession.”⁵ Thus, the mere existence of solutions to a particular problem does not mean that a problem can indeed be solved.

Environment and GPE

The environment in GPE has not been incorporated as a mainstream component of GPE analysis despite awareness of its ever-increasing importance both in resource economic and also social-cultural terms as well as ecological importance. There are no direct environmental approaches to GPE which incorporate the environment in a systemic framework (apart from ecological world systems theory approaches), which illustrates a clear gap in the literature. However, there are many empirical accounts of the impact of certain aspects of GPE on the environment or on certain actors. However, an actor-centric view of GPE and environment neglects the relationship between nature and society in the twenty-first century and the relationship between ecology and social constructs, such as society and economy. In other words, it studies forms of social organization to address environmental degradation rather than the relationship between nature and society from a structural as well as actor-driven perspective. GEP has been more successful in incorporating an understanding of the GPE into its analysis as can be found in the works of Clapp and Dauvergne,⁶ Clapp,⁷ Dauvergne,⁸ Paterson,⁹ and Kütting¹⁰ as well as from a more historical perspective, Chew.¹¹

Empirical analyses of the environmental impact of GPE range from studies of the institutional frameworks set up to deal with environmental problems to the analysis of particular problems and their direct origins. An example of the latter kind of study is Peter Dauvergne’s analysis of the environmental consequences of loggers and degradation in the Asia-Pacific¹² or Matthew Paterson’s study of car culture¹³ while examples of the former kind of literature would be analyses of World Bank or World Trade Organization policies and how they relate to environmental degradation.¹⁴ Most environmental political economy analysis, however, can still be found in the field of regime-type studies of particular institutional frameworks to deal with environmental problems, be they referred to as regimes or as GG institutions.¹⁵

⁵ Harvey 2003, 137.

⁶ Clapp and Dauvergne 2005.

⁷ Clapp 2001.

⁸ Dauvergne 2008.

⁹ Paterson 2001, 2007.

¹⁰ Kütting 2000, 2004, 2010.

¹¹ Chew 2006, 2008.

¹² Dauvergne 2001.

¹³ Paterson 2007.

¹⁴ Williams 2001.

¹⁵ Haas et al. 1993; Breitmeier et al. 2006; and Young et al. 2008.

Here, I shall introduce a framework of nature–society relations relating to global local linkages. I perceive the subject of global–local linkages as a particularly salient aspect of such a GPE framework due to the interwovenness of global social relations. It brings to the study of GEP and GPE an understanding of social institutions over time and how they impact on environmental degradation rather than taking a temporally neutral approach by studying current institutional networks only these are generally acknowledged to be components of the sociology of time and of holistic analysis in general but GPE has neatly compartmentalized itself as being purely concerned with the study of connection between intra-human-dominated networks such as society, political institutions, and economy – from now on all three are being compressed into the “social” in this context. However, another crucial dimension is the equity and power dimension of local–global linkages and how underlying power relations affect the interplay between local and global and inform the choices that can be exercised (or not, as a result) at the local level.

The process of globalization is characterized by a globalizing of production processes, a global division of labor and the liberalization of trade and finance¹⁶ as well as migratory patterns and societal changes as a result. Although these changing structures of economic activity obviously draw after themselves environmental effects, it could be argued that these effects are primarily manifested in increased consumption and increased exploitation of resources and sinks as well as the exploration of previously unused resources and sinks as opposed to a fundamental structural change in the environment–society relations before and during the globalizing economy (as opposed to a previously understood international economy). In other words, it is the extent of economic growth and increasing consumption that is the problem rather than a systemic change in behavior. Thus, there is a change in volume of exploitation but not a qualitative or structural change. Such increased consumption and exploitation is not a new process started under globalization but the continuation of an increasing and expanding international and globalizing economy under modern capitalism as such. So, from this point of view, environment–society relations in the age of globalization are not fundamentally different from previous periods. However, it can be argued that there are important changes in environment–society relations which are not immediately obvious but are still of vital importance and these are to do with a changing power nexus – globalization leading to less local control over the environment.

These changes can primarily be found in the privatizing of nature/environment through the tenets of neoliberal ideology.¹⁷ Through the globalizing of production and finance, the regulation of environmental degradation at the local or national level becomes more difficult because the agents of pollution are not usually located near the source of pollution, although their economic activities take place there. This interference with local ecology through global linkages has been definitive for many people, especially in peripheral locations. At the same time, environment–society relations in the industrialized, consumer countries are not fundamentally changed while the relations between society and environment in developing countries are increasingly shaped by the global or Northern political economy and increasingly less so by local factors.¹⁸ This point applies to both industrializing and primarily agricultural countries (see Mushita and Thompson, 2007 for an account of biopiracy in relation to

¹⁶ Mittelman 2000; Paterson 2001; and Cerny et al. 2005.

¹⁷ Paterson 2001; Peluso and Watts 2001; and Goldman 2009.

¹⁸ Clapp 2001.

agriculture and the global political economy of seeds). So, in global terms globalization has fundamentally changed environment–society relations although this is not immediately obvious from the vantage point of the Northern citizen. In effect, globalization is described by many as a new ecological imperialism.

Globalization is mostly analyzed in spatial terms or from a historical perspective. I shall put forward an alternative form of analysis here based on a juxtaposition of social and ecological time. Time is a notoriously difficult concept to define and exists at various levels of differing complexity. Social time is generally regarded as a measurement or as a tool for organization – it is the clock or calendar time our societies are built on. This is fundamentally different from ecological time which is not a social construct but a complicated natural mechanism that has to be conceptualized and harmonized with social time. In social science analysis, social time is the measurement against which environment is studied. So, for example, the aims and targets of institutional arrangements are based on administrative feasibilities and not on ecological necessities.¹⁹ Therefore, since all social “constructs” and all social arrangements are ultimately located in a physical environment, it is necessary to embed social analysis in a wider understanding of ecological time. It would not make sense to have a social timetable of getting a fisheries conservation policy off the ground in five years’ time when the ecological situation suggests that by that time fish levels will have sunk to such a low level that regeneration would be impossible.

Both time and the environment are frameworks within which social relations occur: they are part of the social framework but at the same time they are more than that as they encompass social relations. They provide a framework within which society has to operate and the structures within which society is located. They impose certain rules on society such as the natural “laws” but at the same time they are part of a process of social construction. This means that they exist independently of society although they are conceived of through a process of social construction. Therefore it is useful to make a distinction between ecological and social rhythms as expressions of time.

Social activity can change environmental rhythms through the interruption or change of ecological cycles. The age of mass production and consumption, and the distancing of the production process from the resource extraction stage have obscured the link between production, consumption and environmental degradation, thus making it difficult to create a directly observable link between the accumulation of capital and the creation of environmental degradation in particular instances.

Global–Local Linkages

The basic idea behind the concept of global–local linkages is that under globalization social relations are spatially removed, creating global–local linkages through economic and cultural practices.²⁰ At the same time, social relations are also temporally removed in two ways: first, events can be experienced simultaneously in different places through sophisticated technology and, second, the consequences of an action or policy may not be felt in a different place until some time after the actual events (temporal distancing). So, time–space distancing is mostly about global–local linkages. A good example of time–space distancing is the ozone hole. The current ozone hole over Latin America, Australia, and Antarctica is caused by the

¹⁹ Kütting 2000.

²⁰ Giddens 1990; and Allen 2003.

production, consumption, and resulting release into the atmosphere of ozone-depleting substances produced and released over 30 years ago in mostly industrialized countries.

Time–space separation disconnects social activity from its particular social context as can also be seen in the field of food production. This distancing is manifested in many developing countries by the growing of cash crops for global markets rather than the satisfaction of local dietary needs (and the import of food crops for urban populations). It will become even more manifest when plant life can be patented and indigenous plant genes will be “owned” by commercial enterprises elsewhere in the world.²¹ In industrialized countries, spatial distance is especially visible through the seasonally unaffected diet of consumers as dictated by supermarket shopping. This distancing leads to a break away from local cultural activities and habits and a move toward “disembedded” institutions, which can be economic, social, or cultural. Redclift sees the main effect of time–space distancing in the confusion between intention, action, and outcome.²² This means that time–space distancing leads to difficulties in establishing causal links between actions and their consequences. As Goodman and Redclift argue with respect to the international food system: “With the simultaneous access to geographically separate production zones, the formation of the world market freed industrial capitals from the seasonality of individual national agricultures, approximating the continuous production process characteristic of industry.”²³

The consequences of this phenomenon are enormous for the understanding of solutions to the problem of environmental degradation. It shows that economic and regulatory structures are “disembedded” and not equipped, thus not able, to adequately address environmental problems. It also shows that events or actions in one part of the globe are either the unintended consequences of actions elsewhere or the deliberate but disconnected results of actions elsewhere.

This disenfranchising of local control is supported by the system of global governance and trade that has been institutionalized in support of neoliberal ideology and supports its smooth functioning. There can be no doubt that the global politico-economic framework legitimized by states and global institutions provides a formidable system for the efficient transfer of resources from the periphery to the core and thus provides a continuation of more violent or more directly exploitative policies of the past. At the same time, despite the increasing environmental rhetoric in the form of the sustainable development discourse, there has been no real attempt to take on board the strained nature of environment–society relations and consequently there has been no real effort to accommodate environment with social or societal needs. Although there is a sustainable development discourse, an ever-increasing number of international environmental agreements and environmental provisions are included in trade agreements, these efforts can at best be seen as efforts to manage environmental problems, and at worst as eyewash supposed to placate those who criticize the hegemonic practices.

The critical globalization literature sees disenfranchisement of the weak and dispossessed as the main weakness of neoliberalism and globalization. This is clearly the case in developing nations such as the farmers in India, the urban poor in Latin America, and the majority of the population in Africa that were never empowered in the first place. It also applies to the roles of governments and their participation in designing the global architecture.

²¹ Miller 2001; and Mushita and Thompson 2007.

²² Redclift 1996, 147.

²³ Goldman and Redclift 1991, 96.

Equity

The connection between equity and environmental dimensions of international relations is rarely made as the environment in IR or in GPE is generally treated from a strictly scientific perspective or as a regulatory matter (see, for example, the regime and governance literature although governance is also concerned with stakeholders which would be an avenue to including equity issues). Thus, the environment is seen as a subject determined by cause-and-effect relationships and their effects on the running of international affairs need to be understood and managed. From this view seeing the environment as subordinate to the international system, it is as good as impossible to perceive of environmental values as such. However, there are many questions relating to the status of the environment and how it relates to social status which are being addressed in other academic disciplines.²⁴ This conceptualizing process also needs to be incorporated into IR or GPE.

There is no need to repeat the theoretical debates on ecocentric versus anthropocentric worldviews or deep versus shallow ecology in this context. However, some discussion needs to take place first of all on the intrinsic value of environmental resources and sinks but also on the distribution among global society of these resources and sinks as well as access to them. There can be no question that well-functioning ecosystems are needed for the survival of the human race and that therefore environmental protection in general is not a luxury but a necessity. Deforestation and desertification, for example, have a very real impact on livelihoods and also on global factors such as climate. Atmospheric problems such as global warming, ozone depletion, or acid rain are other examples of environmental degradation that play a major role for human survival but also for economic and political functioning. These problems and issues are generally agreed to have a significant social dimension and as such are important policy issues. However, the same cannot be said about, for example, species conservation as in the case of the tiger or the panda – or the sea turtle for that matter. These are not generally perceived to be vital issues. Although linkages in ecosystems are not well understood and therefore caution is advisable, it seems that these animals do not fulfill a role without which substantial damage leading to a threat for human survival might ensue. What role, then, should their conservation take? Is this a luxury or do we have a moral obligation to preserve species for future generations, or do we even have an obligation to the species themselves? Should their preservation take precedence over the eradication of hunger, disease, or the creation of livelihoods? Should it take precedence over the principle of state sovereignty, that is, should states be allowed to “interfere” in the internal affairs of another state when it comes to environmental conservation? What about the temporal dimension and intergenerational equity? These are questions that are not the direct focus of GPE but nevertheless have a vital impact on our understanding of both political economy as well as environmental degradation.

Other questions of environmental equity are about control over and access to environmental resources and a clean living environment as well as distribution of resources. At the national level, research has shown quite clearly that it is especially people at the lower end of social strata and low levels of empowerment who are more exposed to environmental degradation and suffer accordingly from health and deprivation problems. Reasons for this phenomenon are that socially marginalized people cannot afford to live in areas unaffected by pollution and often have to live near industrial estates with pollution problems.²⁵ In addition, they are less

²⁴ Little 1999; and Schlosberg 2005.

²⁵ Bullard 2005.

able to overcome environmental restraints through the purchase of healthier goods or filtering devices, for example. In many ways, these findings can be extrapolated to the global level. The national or global policy framework is not set-up to include marginalized actors as recognized agents and this exclusion is precisely what makes this social group so vulnerable and unrepresented, thus leading to concentrations of degradation.²⁶

Another equity issue is the evolution of a global division of labor and the equity dimensions associated with this process. In this global division of labor some regions have clearly been relegated to an agricultural role in the global economy while others have the role of cheap labor supplier. Through the intrinsic connections between the various parts of the global economy these roles are not of choice but are dictated by global pressures. Thus environmental access and equity in terms of consumer goods availability, for instance, are pre-programmed with no realistic way out of this equity deficit. Again, this is a structural constraint of the GPE and one that has existed throughout history in various forms of colonialism. What is different today, however, is that through the privatization of control, the interest in the continued well-being of a particular agricultural area or other economic region is not part of the political set-up any more. Once one region is depleted in environmental or social terms, another region will take its place. Colonial masters were interested in the continued profitability of their land. There is a fundamental difference between the two.

Thus, different levels at which environmental equity is a problem at the international/global level can be discerned. First, there is the agenda-setting power of the various states of the world when it comes to environmental degradation. Second, there is their position in the world economy. Third, there is the issue of purchasing power and consumption. Agenda-setting power is an indirect, structural type of power but equity concerns are by no means limited to structural power. Equity problems can also be found in direct power relations between North and South or between any social groupings. Although coercion by violent means is a relatively rare phenomenon in the international system given the number of actors in it, the number of violent conflicts with an environmental or resource dimension is rising.²⁷ In addition, there is financial and political coercion, which is a historical phenomenon and has become especially obvious through colonialism and modern forms of colonialism. Although politically most states are independent and sovereign, through their economic position in the GPE, which is a direct consequence of historical social relations, they are not. Power can also be exercised by the refusal to participate in problem resolution exercises as the withdrawal of the United States from the climate change negotiations during the Bush years demonstrates. Furthermore, the exercise of direct power through global economic institutions determines the way environmental resources and sinks are used.

This point directly relates to the issue of consumption. Environmental degradation is a problem related not only to production but equally, if not more, to consumption. Thus a phrasing of the sustainable development debate or of common but differentiated responsibilities is focused on production but ignores the consumption side. If the consumption side of the GPE were included in economic analysis of environmental degradation, a different picture of responsibility and duty would arise. The exclusion of the consumption argument thus seems to draw after itself serious equity repercussions which have been neglected in traditional accounts of globalization and environment or even standard development discourse.

²⁶ Merchant 1980; Plumwood 1993; and Schlosberg 2005.

²⁷ Gleditsch 2001.

Thus, in conclusion, it is important that environmental equity becomes a subject more at the forefront of both environmental and global political economy discourses. It is highly relevant to policy discourses as well as issues of environmental ethics as well as social justice. It is also an issue that has been taken up by social movements that pursue the question of global inequality and inequity very seriously, often using vocabulary such as social and environmental justice. It is clearly a very important dimension of governance concerns yet it is a sidelined issue for the reasons discussed above. One of the challenges of a Rio+20 era has to be to incorporate issues of equity and consumption into mainstream discourses more.

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22 Nonstate actors in global environmental governance

Matthias Finger and David Svarin

This chapter is about the emergence of nonstate actors in global environmental politics, a process which already has and increasingly will lead to new forms of global environmental governance (GEG). There are basically two types of nonstate actors, namely business actors or rather transnational corporations (TNCs), which emerge in parallel to the globalizing economy, and nongovernmental organizations (NGOs), which emerge as a reaction to this globalizing economy and especially its negative environmental consequences. More precisely, we shall outline how these nonstate actors have emerged, what these actors concretely do, and what the new distribution of roles among governments, TNCs, and NGOs ideally should be. In conclusion, we shall argue that the emergence of such GEG involving all three types of actors is not only inevitable but also desirable.

Globalization of World Politics: The Emergence of Nonstate Actors

The notion of governance has gained importance in international relations, particularly in connection with the issue of globalization and the changing world order. Following the end of the Cold War, a debate emerged as to whether there was a decline of the nation state and whether the form of power shifted from government to governance.¹ The phenomenon of globalization, both economic and political, further fueled this evolution. This general evolution can be put under the broad concept of governance. Rosenau defines governance as “a system of rule that is as dependent on intersubjective meanings as on formally sanctioned constitutions and charters.”² In this sense, governance implies a move away from the classical notion of government by introducing new forces and new actors into global politics. However, governance does not replace but rather complements government. Hence, governance is of hybrid nature involving state and nonstate actors. Young defines governance broadly as “sets of rules, decision-making procedures, and programmatic activities that serve to define social practices and to guide the interactions of those participating in these practices.”³ In sum, the concept of governance is particularly useful in environmental matters, since the environment does not respect traditional state boundaries and hence cannot be regulated by governments alone.

Especially as a result of economic globalization, new actors, notably TNCs, gained authority and legitimacy in international affairs. Similarly, environmental problems have become a reason for global concern. In addition to state-led initiatives, organizations representing civil society, notably NGOs, have proposed solutions.

Following from the above, it is thus clear that environmental governance takes place globally and involves a wide range of actors. According to one definition, GEG is “the sum of organizations, policy instruments, financing mechanisms, rules, procedures and norms that regulate the processes of global environmental protection.”⁴ Other scholars define GEG

¹ Rosenau and Czempel 1992; Stoker 1998; and Pierre and Peters 2000.

² Rosenau 1992, 4.

³ Young 1997, 4.

⁴ Najam et al. 2006, 3.

as “a fundamentally political process involving struggles over who has the authority and legitimacy to propose rules guiding the practices of states, TNCs, social movements and individuals, and who will benefit and lose out through the adoption of particular rules and their implementation.”⁵ In sum, GEG represents a new form of global cooperation between different actors, from private to public, aiming at the organization and regulation of the global environment.

To recall, traditionally, states had been the most important actors in global politics being the only legitimate source of power and of law-making authority. Yet, fueled by the process of globalization, private and public transnational actors have started to question and challenge the power and authority of states.⁶ These global actors, that is, TNCs and NGOs, now demand voice and power, in part because they are frustrated with the slow pace of state-led governance notably international environmental treaty negotiations.⁷ What emerges today is a consensus that effective environmental governance can only function in hybrid forms and thanks to the cooperation among the many actors involved.⁸ Yet, the question is not whether these nonstate actors deserve a place in the GEG framework but rather how to integrate them and make the best use of them. In Haas’ words, we should seek for “a clearer map of the actual division of labor between governments, NGOs, the private sector, scientific networks and international institutions in the performance of various functions of governance.”⁹ Hence, hybrid forms of governance provide the best chances for the efficient execution and coordination of governance functions because the different actors complement each other. In short,

[T]he involvement of market actors in environmental collaboration is typically aimed at addressing the inefficiencies of state action, often by injecting competitive pressures in the provision of environmental services. ... The addition of community and local voices to environmental governance is seen as providing the benefit of time- and place-specific information that may help solve complex environmental problems.¹⁰

What Do Nonstate Actors Do in Global Environmental Politics?

The discussion about GEG, however, remains quite abstract. It is therefore necessary to examine in more detail what exactly TNCs and NGOs do in global environmental politics.

*What Do TNCs Do?*¹¹

TNCs are active in every economic sector and industry, both financial and non-financial. As a matter of fact, their transnational operations and their global reach have “increased the damage caused to the environment in terms of volume and geographical spread.”¹² It is therefore natural that, at some point in history, the relationship between TNCs and the environment became a matter of public concern and debate.

Concerns about the relationship between TNCs and the natural environment were first raised by activists, following some massive environmental disasters caused by TNC misbehavior, including the highly publicized accidents in Bhopal, India (1984) and the *Exxon Valdez* oil spill

⁵ Paterson et al. 2003, 8.

⁶ See Lemos and Agrawal 2006.

⁷ See O’Neill 2009, 169–72.

⁸ Newell 2008, 520.

⁹ Haas 2004, 8.

¹⁰ Lemos and Agrawal 2006, 311.

¹¹ For a more detailed analysis, see Clapp 2005; and Finger and Svarin 2010.

¹² Khor 2001, 37.

in the USA (1989). As a result of these disasters and subsequent activism against them, it has become almost impossible for TNCs to oppose environmental protection or avoid regulation, and most firms today recognize that they have to play an active role in environmental management. As Berry and Rondinelli noted:

Multinational corporations have gone through a dramatic transformation in their approaches to environmental protection, from 1) avoiding compliance with regulatory controls during the 1960s and 1970s, to 2) reacting to regulatory requirements and attempting to minimize the costs of compliance during the 1980s, to 3) taking control of their environmental problems and even turning them into competitive opportunities during the 1990s.¹³

In sum, it is now commonly acknowledged that TNCs are non-negligible actors in the global environment. They are at the same time partners in global environmental regimes and international treaties involving other actors such as governments and civil society, while also developing their own corporate initiatives and regulations in environmental matters.

Through a number of international conferences such as the “Earth Summit” in Rio in 1992 or the World Summit on Sustainable Development in Johannesburg in 2002, concerns over the state of the global environment have found their way into public awareness. In this context, corporate actors and above all TNCs had to take visible action to change their behavior and to improve their environmental performance. TNCs increasingly disclose information about their environmental behavior through reporting mechanisms, adhere to principles of corporate environmental (and social) responsibility, and initiate and often implement private environmental initiatives and certification standards with significant effects because of their impact over entire supply chains.¹⁴

Voluntary environmental initiatives Instead of waiting for governments and state-led international regimes to formulate environmental regulations, TNCs have started to create and implement their proper initiatives. These initiatives are voluntary and result from a firm’s goodwill, economic calculations, or public awareness. According to Christmann and Taylor, companies generally prefer voluntary corporate initiatives because they offer “substantial advantages over an endless proliferation of competing and often contradictory government standards and requirements at the national level.”¹⁵ Nevertheless, and owing to the fact that voluntary environmental initiatives are neither legally binding nor apply to an entire sector or industry, they should be considered complementary to government regulations.

It is important to remain critical toward corporate self-regulation. In analyzing different codes of conduct, some scholars have found that there is a significant difference between the codes of conduct issued by international organizations and social interest groups and those issued by business support groups and TNCs themselves.¹⁶ The latter indeed rather “draw up codes to influence other actors and/or to anticipate or prevent mandatory regulation” and thus do not represent a viable alternative to forms of regulation that originate in cooperative efforts of the various stakeholders implied.¹⁷

¹³ Berry and Rondinelli 1998, 41.

¹⁴ See Fuchs and Vogelmann 2008.

¹⁵ Christmann and Taylor 2002, 124.

¹⁶ See Kolk et al. 1999.

¹⁷ Kolk et al. 1999, 171.

Corporate environmental reporting Environmental reporting, that is, the publication of a report by a corporation outlining the achievements and aims in terms of the firm's environmental performance, can be an efficient instrument to measure a TNC's environmental behavior and maybe improve its overall environmental standing, because "[a]lthough still a minority, firms that do publish an environmental report experience an increasing need to move from environmental statements and intentions to quantified, comparable, verifiable and even verified information."¹⁸ This means that environmental reporting is an indirect tool for stimulating companies to take responsibility for their actions and to be accountable for the environmental harms they cause. However environmental reporting is generally grounded in "competitive advantage reasons" and less than half of the corporations surveyed conduct research that could lead to more environmentally friendly technologies and production processes.¹⁹ Such findings imply that many corporations consider environmental reporting as a means to prove their environment-friendly image to the consumers, rather than as a concrete action that could benefit the environment.

Private certification standards Since the 1990s, many TNCs have adopted private voluntary (environmental) standards, for example the ISO 14000 or Forest Stewardship Council (FSC) standards, which benefit from widespread acceptance among corporations, governments, and civil society alike. Especially companies prefer to adopt such standards because they "are seen as less intrusive than the command and control type of regulation imposed by governments, and states may relax environmental regulations or monitoring for those firms that become certified to the standard."²⁰ Furthermore, such standards, which are often linked to or allow the use of a visible label, constitute a marketing tool that improves the image of the firm and makes it more attractive to its consumers. TNCs in particular see important benefits in certifications such as ISO and FSC because they are globally acknowledged and relieve them of the need to adapt to a multitude of different national standards.²¹ Standard setting by corporate actors can thus have various beneficial impacts for them. For instance, according to Finger and Tamiotti, TNCs and certifying agencies are keen to set environmental standards and have them recognized by governments and intergovernmental organizations so as to create competitive advantages *vis-à-vis* smaller and Third World firms which cannot afford them.²² But the main concern about private environmental standards in general pertains to their effectiveness: do these standards really have an impact on corporate environmental behavior and ultimately on pollution levels or are they just a means for corporate window dressing?

Lobbying activities Since the 1992 UN conference in Rio, TNCs have regrouped their forces to get involved in and lobby international environmental agreements.²³ The main reasons why TNCs and business groups lobby international environmental agreements are "to prevent the creation of international regulations that would harm them; to make international regulations more business-friendly in cases where some form of regulation is either desirable or inevitable; and to shape the specific nature of regulation to create business opportunities."²⁴ It is true, that

¹⁸ Kolk 1999, 235.

¹⁹ Jose and Lee 2007, 317–18.

²⁰ Clapp 1998, 300.

²¹ Clapp 1998, 300.

²² Finger and Tamiotti 1999, 2002.

²³ Chatterjee and Finger 1994.

²⁴ Falkner 2008, 9.

TNCs are often particularly well represented in such international negotiations. One possible explanation for this phenomenon is that business actors often have privileged access to domestic policy-makers which helps them to indirectly also shape international negotiations.²⁵ TNCs are able to mobilize massive resources to be present at and lobby international environmental agreements.

What Do NGOs Do?

Civil society actors have become increasingly powerful in global environmental politics. Transnational activist networks, social movements and particularly environmental NGOs (ENGOS) have an important role to play in GEG.²⁶ These civil society actors participate in what one scholar has termed “world civic politics,”²⁷ a typical expression of global governance. In this realm, civil society actors and NGOs have indeed some power to influence environmental policy-making and hold some leverage over other actors in GEG. ENGOS have become increasingly important and influential in GEG. In sum, ENGOS participate through a wide range of activities in the process of GEG:

[T]hey try to raise public awareness of environmental issues; they lobby state decision-makers hoping to affect domestic and foreign policies related to the environment; they coordinate boycotts in efforts to alter corporate practices harmful to nature; they participate in international environmental negotiations; and they help monitor and implement international agreements.²⁸

NGOs have recognized the shift in global politics and adapted to the new framework in which TNCs are potent actors working hand in hand with governments. Partly because of the perceived collusion between states and business actors, which is further exacerbated thanks to globalization, environmental activists have developed new ways to oppose the power of business. Increasingly, since the 1990s, they target business directly, rather than channeling their lobbying through the state, thus reflecting the post-Cold War shift in the balance of power between states and markets. This strategic shift in the campaigning activities of ENGOS has taken a number of forms, from confrontational approaches to more collaborative strategies of engagement.²⁹

Raising public awareness One of the main strengths of ENGOS is their capacity to raise public awareness and disseminate information concerning environmental problems.³⁰ This is a crucial function because no action against further environmental deterioration would be taken without the prior knowledge of the actual state of the environment. The dissemination of information equally helps to put environmental issues on the global agenda and thus to pressure other actors to get involved in GEG. ENGOS thus engage in organizing information campaigns aimed at consumers and increasingly try to influence international decision-making processes regarding treaties and standards for corporate environmental regulation. Nevertheless, Lundan argues that the role of NGOs remains quite limited:

²⁵ See Falkner 2008, 28–9.

²⁶ Princen and Finger 1994.

²⁷ Wapner 1995.

²⁸ Betsill and Corell 2001, 67.

²⁹ See Newell 2005, 36–7.

³⁰ Gemmill and Bamidele-Izu 2002, 89.

In a global economy where multinationals are very influential and national regulators are keen on maintaining a good working relationship with large firms, NGOs can pose awkward questions on behalf of affected citizens. On the other hand, most NGOs operate with very limited resources, and by their very nature are likely to focus on issues that are easily recognizable and likely to generate publicity.³¹

Monitoring international agreements ENGOS are important in the implementation and the monitoring of environmental regulations and international agreements,³² especially in developing countries.³³ ENGOS and local groups can effectively control whether firms (but also states) respect environmental standards and regulations, particularly in places where the general public interest is rather small and official support is hard to obtain.³⁴ ENGOS, and above all the big international ones, such as the Worldwide Fund for Nature (WWF; formerly the World Wildlife Fund) or the International Union for the Conservation of Nature (IUCN), benefit from a large network of peoples across many countries and are thus particularly prone to coordinate efficient environmental policies globally.

Participation in international negotiations Probably the most efficient implication of ENGOS in GEG is their participation at international negotiations of environmental agreements. Although civil society actors are often only allowed as observers (a status which is often limited to the very big NGOs, such as Greenpeace or the WWF), they still manage to lobby these agreements, mainly through the use and distribution of information.³⁵

We have argued that ENGOS are crucial and influential participants in GEG; yet, these environmental organizations also have several weaknesses. The major weakness of ENGOS pertains to their lack of legitimacy and accountability: “their mandate is drawn from a self-selected constituency that makes no claim to be representative of a broader national constituency.”³⁶ This is a serious issue because many ENGOS, particularly the big transnational NGOs, have their proper agenda and do not necessarily speak for a broad or even a global audience. Furthermore, the efficiency of civil society-based regulation as opposed to the power of governments has been questioned by some observers.³⁷ It is true that most environmental organizations are small and operate locally and thus do not have the necessary resources to really influence environmental policy-making. Additionally, they are vulnerable to the influence of TNCs who sometimes finance or support these organizations and thus manage to exert control over them.

What Role for Which Actor in Global Environmental Governance?

In this section we systematically look at the role each actor, that is, the nation state, TNCs and NGOs, actually does play in global environmental governance. This will lead us to conclude that even though each actor has its own merits, sustained cooperation between these actors is crucial for the effectiveness of global environmental governance.

³¹ Lundan 2004, 166.

³² O'Neill 2009, 59.

³³ Najam et al. 2006, 64.

³⁴ Gemmill and Bamidele-Izu 2002, 92.

³⁵ For an in-depth study of NGO involvement in international negotiations, see Betsill and Corell 2008.

³⁶ Detomasi 2007, 327.

³⁷ Newell 2001.

What Role for the Nation State?

In global politics, as well as in GEG, states are still the most important actors. Yet, states increasingly feel the pressures of the changing dynamics in global politics and the challenges to their predominant position by other actors such as TNCs and NGOs. Still, states have authority over TNCs and their actions because TNCs still have to operate under the umbrella of national laws and regulations. Yet, such national state-led regulations face important challenges because of the organizational and institutional nature of TNCs. It is true that TNCs often evade environmental regulation because they operate at the intersection of national and international jurisdictions. Hence, the classical approach of state-based regulation has to be replaced by a complex, multilevel form of governance.

The power of the state Although in the past one could observe a certain decline in the power and influence of states, they still have a large range of tools at their disposal to control and regulate other global actors. The establishment, implementation, and monitoring of efficient GEG systems would be impossible without the approval of nation states or of multilateral organizations. In essence, the principal functions and strengths of states are that they provide “forces of law and order, a legitimacy grounded in years of political practice, financial aid and policy tools” which emanate from their inherent public nature and authority.³⁸ Furthermore, states have the necessary sovereign authority to enforce legislation and to punish those actors that act against it. For instance, national governments have significant leverage over the actions of TNCs in terms of environmental compliance. Thanks to a large range of legal tools available to states, it can become very costly for corporations to neglect environmental regulations.³⁹

It is important at this point to also mention the downside of states. In terms of environmental sustainability, states are among the most harmful actors. The state often disrespects the environment in many ways through its military activities, exploitation of natural resources, energy production or other activities. Furthermore, states are not neutral when it comes to tackling environmental problems and finding appropriate solutions.⁴⁰

Multilateral environmental agreements In general, when we talk about state-led environmental governance, we often refer to international and multilateral environmental agreements.⁴¹ International negotiations and conventions such as the diverse UN summits have created dynamics of their own. Yet, they still are built upon the legitimacy of nation states and are therefore able to generate globally respected regulations. The establishment of international environmental regimes often forces states to transfer some of their sovereignty to supranational organizations. This represents both a challenge and a chance to the basic notion of the nation state, as Conca points out:

Such regimes can and do cause states to lose some operational sovereignty (in the sense of the autonomy to act unilaterally). But in the process states also gain both a renewed endorsement of their formal sovereignty (because it is they, after all, who have the standing to participate in the regime) and a strengthened functional sovereignty (in the form of more effective problem-solving capabilities).⁴²

³⁸ O'Neill 2009, 53.

³⁹ Lemos and Agrawal 2006, 308.

⁴⁰ Finger 2008.

⁴¹ See O'Neill 2009, chapters 4 and 5.

⁴² Conca 2005, 184–5.

Multilateral environmental agreements are ultimately state-led initiatives because states make up international organizations and provide them with the necessary legitimacy. Through these mechanisms, states have been put into a new role in GEG, notably the role of an arbitrator or even a broker at the intersection between the other actors.

What Role for Civil Society and NGOs?

When we talk of civil society actors, especially in the context of global environmental politics, we usually refer to environmental NGOs. However, there are also other, less institutionalized actors that are based upon and find their support within the civil society. In essence, we can distinguish between two types of civil society actors in GEG: institutionalized actors such as NGOs and environmental think-tanks and radical actors such as grassroots and social protest movements.⁴³ ENGOs are often highly institutionalized, particularly the big international NGOs that actually participate in multilateral environmental negotiations, and it is said that they have often lost touch with their (local) base.⁴⁴ These institutionalized actors are often in opposition to much smaller and local movements that organize community protest and actions against environmental degradation and unsustainable business behavior. This divide between these two types of actors – that is, global versus local NGOs – is further exacerbated by a rich/poor and a developed/developing country divide in the sense that most of the influential, institutionalized ENGOs are actually based in developed countries.

Since the Earth Summit in Rio in 1994, the presence of civil society actors at international (environmental) negotiations and conferences has become standard. Yet there are many ways of participation which refer to the distinction made above. On the one hand, there are those actors participating inside, that is, within the framework of the negotiations, and on the other, there are those actors participating from the outside, that is, not as official participants. As Fisher points out:

International and domestic NGOs ... tend to be the only civil society actors who participate in the meetings of international institutions and multilateral regimes and they tend to use more institutionalized forms of action. Although these types of organizations are the only ones that participate inside these international meetings, other civil society actors are involved in discussions surrounding the meetings; but they tend to participate outside. Particularly, transnational social movements have organized around these meetings to stage protests and demonstrations.⁴⁵

As we can see, the nature but also the means of action of different civil society actors differ significantly. Furthermore, these different actors also do not necessarily have the same goals. Whereas ENGOs, particularly the big international ones, might aim at creating public awareness and actually participating in environmental policy-making, local environmental activists try to influence and change problems in their immediate environment.

Nevertheless, environmental organizations are increasingly important in the formulation and implementation of environmental policies. Tamiotti and Finger have argued that in essence environmental organizations have three distinct functions: “the decision-making function, the implementation function, and, increasingly, the monitoring of compliance function.”⁴⁶

⁴³ See Ford 2003.

⁴⁴ See Ford 2003.

⁴⁵ Fisher 2004, 181.

⁴⁶ Tamiotti and Finger 2001, 67.

More generally, the activities of ENGOs are mainly directed toward three distinct domains, namely state behavior, economic forces, and society at large.⁴⁷ Within each of these domains, ENGOs apply different tactics and serve different aims. ENGOs advise national governments to take up further action in favor of the global environment and encourage the establishment of international environmental regimes. In the social fore, ENGOs try to sensitize local communities and make them aware of their environmentally unsustainable behavior. Finally, ENGOs try to hold corporate actors accountable and engage them in environmentally more sound practices.⁴⁸ When it comes to TNCs, environmental organizations have elaborated a range of practices to influence TNC behavior. These practices can be either called “liberal governance” or “critical governance.”⁴⁹ Liberal governance is inscribed in the “current economic system,” based on market functions, and aims at “rewarding good business practices.”⁵⁰ It is based upon partnerships between TNCs and NGOs and functions through such practices as ecoconsumerism or codes of conduct. Critical governance, on the other hand, focuses on immediate changes and short-term benefits for the environment. For example, consumer boycotts or shareholder activism.⁵¹

To summarize, environmental activist groups and NGOs occupy an important place in GEG, both as a sort of public conscience and as an actor with an efficient set of tools to actually implement and monitor the outcomes of environmental governance.

What Role for TNCs?

Private governance includes governance by all nonstate actors.⁵² However, among all the different nonstate actors, TNCs are among the most powerful, mainly because of their international reach and strong financial assets. Hence, there has been growing attention to the involvement of business actors in global governance in general⁵³ and in environmental governance in particular.⁵⁴ Firms, and above all TNCs, decide to formulate rules, initiate projects and implement standards for sustainable behavior. They do this either by themselves, which is called “business self-regulation,”⁵⁵ or together with other firms and/or business associations, which is then labeled “business co-regulation.”⁵⁶ Cashore has termed this kind of governance by business actors “non-state market-driven governance” (NSMD). NSMD is constituted by “private governance systems that derive their policy-making authority not from the state, but from the manipulation of global markets and attention to customer preferences.”⁵⁷ The idea behind NSMD governance is to respond to the economic and financial logic of corporations, thereby creating incentives for corporations to participate in environmental protection efforts.⁵⁸

⁴⁷ See Wapner 2000.

⁴⁸ See Wapner 2000, 94–102.

⁴⁹ See Newell 2001.

⁵⁰ Newell 2001, 91.

⁵¹ Newell 2001, 95–6.

⁵² Private governance refers to the fact that private, nonstate actors such as firms and NGOs are becoming more important in global institution/rule development and global governance in general. See, for instance, Clapp 1998; Cutler et al. 1999; Hall and Biersteker 2002; and Pattberg 2005, 2007.

⁵³ See Fuchs 2007.

⁵⁴ See Falkner 2003, 2008; and Levy and Newell 2005.

⁵⁵ See Hauffer 2001; and King and Toffel 2009.

⁵⁶ Pattberg 2007, 26.

⁵⁷ Cashore 2002, 504.

⁵⁸ Bernstein and Cashore 2007, 350.

This is not to say that business actors only get involved in sustainability governance when they perceive an economic benefit. On the contrary, it is now generally accepted that the role for corporations is going beyond the purely economic dimension and thereby leads them to assume social and ecological responsibility.⁵⁹ The growing acceptance of private governance schemes and the involvement of business actors have led to the institutionalization of such forms of private governance. Thus, according to Pattberg, the “key point is that the institutionalisation of private governance has led to new forms of transnational organisation as an emerging form of post-sovereign order in world politics, complementing international and predominantly state-based forms of organisation.”⁶⁰ In sum, private actors and especially TNCs have now moved from compliance (with existing regulations) to rule setting (formulate regulation).

Conditions for the involvement of TNCs Although it is by now clear that TNCs have an important role to play in global governance, the conditions under which these actors agree to participate are still understudied. For example, it has often been said that it is detrimental for firms to behave according to sustainable development principles. Nevertheless, many corporations do now subscribe to some sort of sustainable development practices.

According to a study by Campbell, one can distinguish between two sets of factors that condition a corporation’s commitment to sustainable development. These are economic conditions and institutional factors.⁶¹ Economic conditions refer to the financial health of a firm as well as to the general characteristic of the market in which the firm operates and the competition it faces. Campbell concludes that the healthier a company is financially and the less competition it faces, the more it is likely to commit to sustainable development.⁶² Yet, a second set of factors, namely institutional factors, also influence firm behavior. Says Campbell: “Corporations are more likely to act in socially responsible ways the more they encounter strong state regulation, collective industrial self-regulation, NGOs and other independent organizations that monitor them, and a normative institutional environment that encourages socially responsible behavior.”⁶³ In addition, Rondinelli and Berry emphasize the fact that corporations also commit to sustainable practices because, by doing so, they are able “to maintain control over their own environmental activities, provide evidence of planning and interaction to address environmental issues, and influence future regulatory and competitive requirements.”⁶⁴

Conclusion: The Inevitability of Global Environmental Governance

The process of globalization has increasingly led to a fragmentation of power and the emergence of new actors besides the nation state. Nonstate actors such as TNCs and NGOs are now involved in global rule-making and are increasingly active in global governance. This particularly concerns the domain of environmental governance. Both, TNCs and NGOs have started to contribute to the search for solutions to global environmental problems, be it alone or in cooperation with others. Each of these actors has a distinct role when it comes to environmental governance. As shown above, these roles often differ strongly, yet also

⁵⁹ Haufler 2009, 129–30.

⁶⁰ Pattberg 2007, 199.

⁶¹ See Campbell 2007.

⁶² Campbell 2007, 962.

⁶³ Campbell 2007, 962

⁶⁴ Rondinelli and Berry 2000, 74.

complement each other. Only when nation states, TNCs, and NGOs fully realize that GEG can only be effective when they cooperate and coordinate their actions, can there be an improvement of the state of the global environment.

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23 The effectiveness of private environmental governance

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Why concern oneself with private environmental governance or even more specifically with the effectiveness of private environmental governance? Is it not way too small a topic? Does it not just present a tiny piece of the mosaic of global environmental governance? No! It is a core piece of the mosaic, adding not just a detail to the overall picture, but allowing the observer to understand the picture in a more comprehensive and fundamentally different way. In this chapter, therefore, we pursue two goals: to underline the relevance of the question of the effectiveness of private governance by situating it in the overall context of global (environmental) governance, and to delineate the state of the art in current research on the effectiveness of private environmental governance.

Accordingly, the chapter proceeds in two steps. First, we discuss private governance and place the question of its effectiveness in the context of today's broader norms and practices and associated political and scientific debates. Thereafter, we turn to the challenge of evaluating the effectiveness of private governance, discussing, integrating, and contrasting determinants of effective private environmental governance as identified by different theoretical perspectives. In the concluding section, we summarize core implications for research and politics.

Private Environmental Governance and the *Zeitgeist*

Private governance institutions, that is, institutions created by nonstate actors to “govern – that is, ... enable and constrain – a broad range of activities in the world economy,”² have proliferated in the last decades.³ Via such institutions, nonstate actors nowadays design, implement, and enforce rules in a large range of fields and sectors, including even politically sensitive ones, at all levels of governance.⁴ These activities by private actors underline their role as key political actors in global governance, a role that goes substantially beyond traditional activities by business actors and/or civil society such as lobbying and awareness raising.⁵

Private governance initiatives may use different mechanisms to achieve their goals, including corporate codes of conduct (CoC), corporate social responsibility (CSR) reporting, private labeling, certification, and – often associated with the last – private standards.⁶ Corporate CoCs tend to be created as written guidelines on the basis of which companies interact with their workforce, suppliers, state authorities, and external stakeholders.⁷ CSR efforts include measures from the reporting of business activities relating to social, human rights, and environmental themes, to philanthropy and efforts to improve one's environmental and social conduct.

¹ The authors are grateful for the excellent research assistance provided by Marietta Müller.

² Büthe 2010, 1.

³ Cutler et al. 1999; and Hall and Biersteker 2002.

⁴ Lock 2001.

⁵ Fuchs 2005.

⁶ See also Fuchs et al. 2011.

⁷ Greven 2004, 142.

Labeling and certification schemes aim to signal characteristics of a good or its production process to a target audience, often with respect to the compliance with standards specifying criteria against which product or process characteristics have been assessed.⁸ Certified standards usually represent the strictest form of private governance, as they typically require regular internal and/or external auditing processes and may include disciplinary penalties and/or rewards. In sum, with these governance institutions, private actors increasingly are involved in the design, implementation, and enforcement of rules and principles governing the global economy at all points from inputs to production to sale, thereby impacting the welfare of societies across the globe.

Private governance has received ambivalent evaluations in politics and science. Some observers have interpreted it as a signal of business taking responsibility and argued that it provides a particularly effective and efficient way to pursue the creation of public goods in a globalized world.⁹ They have emphasized the lack of appropriate public regulation, the missing public regulatory resources and political will, as well as the win-win situation created by business' supposed interest in creating and maintaining functioning markets and reducing economic risk resulting from potential scandals.

Others, however, have argued that private governance primarily consists of window-dressing activities motivated by the wish to forestall or undermine more stringent public regulation.¹⁰ From this perspective, one can link the trust placed in private governance and therefore the legitimacy attributed to business as a political actor to the larger *Zeitgeist* with its emphasis on market mechanisms rather than politics, on voluntary exchange rather than the (ab)use of power, and a functionalist approach to governance rather than an inquiry into the *cui bono* of governance.¹¹ In the worst case, the hype about CSR and private standards, which has developed since the 1990s with increasing numbers of publications, conferences, professorships, and study programs as well as think-tanks and university centers, is nothing but a red herring, used to prevent rather than foster improvements in the sustainability of the global economy.¹²

Against such a critical view, one can argue that private governance is merely the business reaction to a demand placed upon it by public and civil society actors. Yet, the question remains *how* business reacts to this demand, with investments in governance institutions ensuring a change in conduct or with rhetorical steps and image campaigns maintaining the status quo and deflecting its challengers. Clearly, both outcomes are possible as well as the range of possibilities in between. Moreover, both may allow business to ensure its license to operate as well as its legitimacy as a political actor with a "privileged voice."¹³

In other words, evaluations of the fundamental nature of private governance – and therewith the democratic legitimacy of a crucial facet of the current political role of business in (global) governance – rest on perceptions and assumptions regarding its ability to effectively contribute to the pursuit of public goods and sustainable development. In consequence, an inquiry into the conditions, under which this will be the case, becomes pertinent. Understanding the

⁸ Nadvi and Wältring 2002.

⁹ Bäckstrand 2006; and Glasbergen 2010.

¹⁰ Clapp 1998; Gibson 1999; and King and Lenox 2000.

¹¹ Such an apolitical interpretation of governance corresponds to the early political and scientific debates on global governance, which similarly neglected the issue of power and the question in whose interest governance institutions actually worked (Fuchs 2007).

¹² See Fuchs and Kalfagianni (2009) for a discussion of the implications of the discursive power involved in the relevant activities for the case of the food retail sector.

¹³ Büthe 2010, 20.

determinants of the effectiveness of private governance, in turn, will allow us to decide, under what conditions a fostering or a constraining of private governance is necessary, that is, specify the necessary role for public governance *vis-à-vis* private governance.

The Effectiveness of Private Governance

Initially, the literature provided mainly anecdotal evidence and case studies on the effectiveness of private (environmental) governance.¹⁴ This evidence also often suffered from a lack of attention to the question of how one defines effectiveness. Recently, however, there have been a number of new efforts at theoretically based, systematic comparative inquiries into the determinants of effective private governance institutions. Nevertheless, the difficult beginning of scientific analyses of effectiveness in this field should not come as a surprise. After all, the phenomenon of (increasing) private governance had to be recognized first and its nature assessed. Moreover, we have seen similar developments in other fields. Thus, the study of international environmental regimes also initially showed a lack of attention to the question of their effectiveness and, subsequently, scientific debate on the determinants of this effectiveness.¹⁵

Scholars are now approaching the study of the effectiveness of private environmental governance from a variety of theoretical perspectives and with different foci. Regarding the latter, some efforts focus on what Easton has termed “output,” while others focus on “outcome” in David Easton’s terminology.¹⁶ Regarding the former, we see rationalist institutionalist, historical material, and organizational approaches, for instance. The following discussion presents and compares the different arguments on the basis of three paradigmatic approaches. We start with a review of the literature focusing on explaining output, and then turn to attempts to explain outcome.

When studying the output of private environmental governance institutions, we can define effectiveness in terms of the stringency of norms, rules, and standards designed by the institutions, for example, the extent to which private environmental standards entail strict prescriptions for environmental conduct. Such prescriptions can be reflected in clear and verifiable/measurable targets, ambitious targets, and monitoring and sanctioning mechanisms (including the aspects of third-party auditing and the public accessibility of reports).¹⁷

A number of scholars adopt a rational institutionalist perspective when exploring determinants of the effectiveness of private governance in terms of output. This perspective assumes that the fundamental units of analysis are utility-maximizing private actors, especially business actors who endorse private governance institutions on the basis of self-interest calculations.¹⁸ Adopting an investment logic, Fuchs and Kalfagianni,¹⁹ for instance, argue that

¹⁴ See Vogel 2008; and Mattli and Woods 2009, though, for more ambitious approaches.

¹⁵ Underdal 1992.

¹⁶ Easton 1965. Attempts to explain “impact” are less common due to the difficulty in disentangling the impact of private governance institutions from broader global trends and phenomena, such as processes of globalization and economic liberalization, in general, the financial crisis, and so on.

¹⁷ From a sustainability perspective, one may also want to pay attention to the comprehensiveness of the sustainability dimensions addressed, in particular the concern for social issues next to environmental ones.

¹⁸ See also Abbott and Snidal 1998. Of course, business actors are not the only ones engaged in private governance. Civil society organizations but also public actors are often part of these arrangements. Regarding civil society (and/or public) actors participating in private governance arrangements, rational institutionalist approaches point out that positive perceptions about goal attainment, for example, sustainability, constitute incentives for the mobilization of support even if such goals are narrowly defined and might not address fundamental critiques or concerns (see also Cashore 2002). The primary focus of institutionalist approaches to the effectiveness of private governance, however, lies with business actors.

¹⁹ Fuchs and Kalfagianni 2011.

the patterns of adoption and support of private rules as well as the stringency and strictness of such rules are determined largely by the preferences and capacities of private actors. Specifically, private actors create and endorse private governance institutions as long as the expected benefits of such investments in private governance outweigh the costs.²⁰

Two functions performed by private governance institutions gain the support of private actors according to a rationalist perspective: (i) the reduction of transaction and other types of costs, and (ii) the provision of reputation and financial benefits. In terms of costs, private governance institutions facilitate the reduction of information gaps and uncertainty, costs associated with negotiations (that is, when, with whom and what to discuss, and in what terms) and costs of enforcement (that is, establishing the conditions and instruments for punishment when a contacted transaction is not completed).²¹ In terms of benefits, rational institutionalist approaches emphasize reputation and financial gains as pivotal incentives in endorsing private governance. Examples include the payment of less expensive premiums and increased access to capital from lending institutions to firms adopting ISO 14000 due to the enhancement of the firms' environmental image to consumers, other firms, and investors.²² Similarly, companies listed under the Dow Jones Sustainability Group Index gain improved access to banks' and insurance companies' investment funds.²³

Cost-benefit calculations differ for different actors. Characteristics such as position in the market, vulnerability to nongovernmental organization (NGO) campaigns, sector characteristics, cultural origin, proximity to consumers but also a genuine concern for social and environmental improvement within senior management are factors that affect firms' decisions to adopt voluntary regulation.²⁴ In forestry certification, for instance, actors with high commercial and/or reputational benefits, such as niche and higher-end producers, appear more likely to adopt private voluntary programs in relation to low-cost operators.²⁵ Other scholars have made similar observations for the certification of coffee and fisheries where "good-quality" producers and suppliers usually situated in countries with well-regulated and -controlled environments appear to have higher incentives to adopt voluntary programs.²⁶

Following this institutionalist logic, Fuchs and Kalfagianni²⁷ argue that the effectiveness of private governance is likely to be a function of external pressure, internal collaboration, the characteristics of the "problem" and available "solutions" as well as the interaction between the stringency of a standard and its uptake. They link external pressure to the visibility of the governance institution, the visibility of participating actors, especially transnational corporations, or the visibility of a problem.²⁸ Moreover, they consider the home of actors in the initiative, as Northern/Western consumers have a larger track record of boycotts and political consumerism.

²⁰ See also Fuchs 2007.

²¹ See Cutler et al. 1999.

²² Clapp 1998

²³ Hedberg and von Malmborg 2003.

²⁴ See also Courville 2003; Fuchs 2007; and Fuchs and Kalfagianni 2011.

²⁵ Auld et al. 2008; and Marx and Cuypers 2010.

²⁶ Muradian and Pelulessy 2005; and Gulbrandsen 2010.

²⁷ Fuchs and Kalfagianni 2011.

²⁸ They operationalize the visibility of the governance institution or participating actors via their size for the institution: membership and market coverage; for the actors: workforce and turnover, the existence of previous scandals or NGO campaigns targeting the institution as such or relevant actors in it, and the proximity to consumers, that is, the retail end of products' cycles. They operationalize the visibility of the problem via its media uptake and/or its presence on the political agenda of governmental or intergovernmental actors as well as large NGOs.

Next to external pressure, Fuchs and Kalfagianni²⁹ argue that internal collaborative aspects are likely to influence the stringency and uptake of an initiative. Here they ask, which types of actors (business/civil society) gave the initial impulse for its creation, and which participate in the governing boards of the institution, in what function (observer status, decision-making power) and with what degree of potential influence (minor, equal, major share of votes).³⁰ The underlying argument is that a larger involvement of civil society actors is likely to improve the stringency of the governance institution.³¹ Taking the opposite perspective, Jaffee and Howard³² as well as Scott et al.³³ have found that business involvement in civil society created initiatives, specifically in the fair trade and organic food sectors, has led to a watering down of the standards prescribed by private governance institutions.

Fuchs and Kalfagianni³⁴ further argue that the nature of the problem, which the governance institution addresses, as well as the availability of solutions to it will affect the stringency of a private governance institution. Thus, cooperation and compliance are more easily achieved in the context of classical coordination problems than in the context of prisoner's dilemmas inviting free-riding behavior of supposed participants.³⁵ Similarly, it is much easier for actors to agree on a stringent standard, when cheap solutions, either technological or organizational, are available. If instead systemic changes are needed to solve a problem, a level of stringency fostering such changes is much less likely. Finally, the stringency and uptake of a standard are likely to interact, as Fuchs and Kalfagianni acknowledge. Thus, the stringency of a standard is likely to be a function of the size and heterogeneity of the group designing and adopting the standard. Here, the market structure may well play a role. As Haufler³⁶ has argued, oligopolistic market structures with lower levels of competition may foster the development of effective private governance institutions. This influence is controversial, however. In a 2006 study, Polaski³⁷ found higher levels of competition to be supportive of effective private governance institutions.

Mayer and Gereffi³⁸ likewise analyze determinants of the effectiveness of private governance institutions with a focus on output. However, they employ a historical materialist perspective building on Polanyi³⁹ and start from the idea that private governance developed as a reaction to societal pressure and a lack of public governance in certain areas. In other words, Mayer and Gereffi build their argument on the dynamics of interaction between public and private governance.

Mayer and Gereffi identify four factors as core determinants of the effectiveness of private governance. First, they argue that the structure of the particular global value chain has an

²⁹ Fuchs and Kalfagianni 2011.

³⁰ Public actors may also be involved in public-private governance institutions, but their impact on the stringency and uptake of the standard cannot be predicted as easily, due to the potential for rent seeking and capture of public interests by private ones. In the cases studied in this chapter, public actors were not present, moreover.

³¹ Moreover, Fuchs and Kalfagianni point to the potential facilitative role of processes fostering learning and best-practice transfer.

³² Jaffee and Howard 2010.

³³ Scott et al. 2009.

³⁴ Fuchs and Kalfagianni 2011.

³⁵ Underdal (1987) showed the same for international environmental regimes, arguing that "malign" problems characterized by competition among actors are much more difficult to solve.

³⁶ Haufler 2001.

³⁷ Polaski 2006.

³⁸ Mayer and Gereffi 2010.

³⁹ Polanyi 1994.

important impact, as a presence of large lead firms with economic leverage over smaller suppliers in a given supply chain will foster the adoption and compliance with rules and standards supported by the governance institution.⁴⁰ Note that this argument entails two conditions, however: (a) large firms with economic leverage need to be included in the supply chain and (b) these large firms need to be leaders in terms of the objectives of the governance institution.⁴¹

Second, Mayer and Gereffi⁴² hypothesize that brand identity, with respect to both products and firms, will have a positive effect on the effectiveness of a private governance institution. Third and related to the second point, they expect societal pressure to have an impact and differentiate between scenarios with different potentials for such societal pressure. Specifically, they point to the possibilities for collective action by consumers, workers, or other activists as well as the likelihood of free-riding as important influences on the probability and extent of societal pressure. In this context, they also identify the facilitatory role of prior organization as well as the “inherent dramatic potential of the issue.”⁴³

Fourth, Mayer and Gereffi argue that the existence of win–win situations, that is, the extent to which commercial interests of lead firms align with social and environmental concerns influences the effectiveness of private governance institutions. They claim that private governance can therefore more easily serve environmental objectives, in which one may be able to link environmental improvements to reductions in resource use and therefore input costs, than social objectives, involving labor issues. However, one should keep in mind that only some environmental problems are associated with such potential win–win scenarios, while they also exist for certain labor issues.

Kalfagianni and Pattberg,⁴⁴ in turn, adopt an organizational perspective when studying the effectiveness of private governance institutions. Importantly, they aim to explain outcome rather than output. Kalfagianni and Pattberg define this outcome as consisting of first- and second-order effects, with first-order effects referring to those intended by the organization and limited to its immediate audience and second-order effects referring to broader regulatory and socioeconomic developments beyond this audience.⁴⁵ Specifically, Kalfagianni and Pattberg want to explain compliance and uptake, as well as material, cognitive, and regulatory effects, with material effects referring to the structuring of markets (including access), cognitive effects referring to knowledge creation and distribution, legitimacy issues, as well as the evolution and/or harmonization of standards of rival organizations, and regulatory effects referring to the link to intergovernmental processes.

Kalfagianni and Pattberg argue that these effects can be explained by the organizational characteristics of the governance institution, information strategies and transparency, and the

⁴⁰ In addition, Mayer and Gereffi point out that the existence of economic leverage is not merely a question of size, but will depend on specific characteristics of the relationships between the relevant actors, as well as on the transparency of practices (see also Locke et al. 2009; and Auld et al. 2010).

⁴¹ The twofold nature of this argument is well reflected in Dauvergne and Lister’s (2010) finding that big retailers in the timber sector are in a position to function as potential chain leaders in improving the conditions in the timber sector and therefore the world’s forests, while at this point, however, their pressure predominantly leads to cost cutting and further deteriorations in sustainability.

⁴² Mayer and Gereffi 2010.

⁴³ Mayer and Gereffi 2010, 12.

⁴⁴ Kalfagianni and Pattberg 2011.

⁴⁵ Some observers may consider the second-order effects an element of impact rather than outcome in Easton’s (1965) terminology. However, Kalfagianni and Pattberg define impact in terms of the environmental and socioeconomic changes developing as a result of the first- and second-order effects identified.

external institutional context. Among the organizational characteristics, they consider the rules of participation (types of actors and regional distribution), decision-making procedures (majority, consensus) and funding structures decisive. Similar to Fuchs and Kalfagianni,⁴⁶ they expect NGO participation to have a positive impact on an institution's effectiveness. With respect to decision rules, Kalfagianni and Pattberg point out a potential trade-off. Consensus requirements may, on the one side, increase compliance due to a potentially increased perception of legitimacy by participants, but they may, on the other side, lead to long negotiations and blockades against effective action. With regard to funding, Kalfagianni and Pattberg highlight the potentially constraining effect of a dependence on external funds, but also point to the important role the budget of a governance institution can play for its promotional activities.

The second group of factors that Kalfagianni and Pattberg identify as important determinants for the effectiveness of a private governance institution relate to information strategies and transparency. Specifically, Kalfagianni and Pattberg argue that the availability of relevant information to members of the institution as well as to external actors can improve legitimacy and accountability. These, in turn, are likely to be linked to cognitive and regulatory effects.

The third important factor in Kalfagianni and Pattberg's account is the external institutional context of a given private governance institution. Here, they point out that a link to existing intergovernmental governance institutions can greatly improve the impact of that governance institution. Thus, the recognition of the ISO standards by the World Trade Organization WTO clearly provided it with a competitive edge *vis-à-vis* other private standards.

Fourth, Kalfagianni and Pattberg claim that a group of variables summarized under the heading "policy design" influences the effectiveness of private governance. Here, the dependent variable of the analyses focusing on output, named above, becomes an important independent variable. In other words and not surprisingly, Kalfagianni and Pattberg argue that the stringency and comprehensiveness of standards has an impact on the outcome that these standards can achieve. They further identify the strictness of compliance methods as well as the costs of compliance as relevant variables in this context.⁴⁷

Finally, Kalfagianni and Pattberg also recognize the problem structure as a crucial influence. Rather than defining the problem structure as an additional independent variable, however, they conceive of it as a filter (that is, control variable) for the influence of the other factors. Kalfagianni and Pattberg conceptualize the problem structure in terms of the nature of the problem (that is, the scale of temporal and spatial effects), its salience, the level of awareness existing in society, the extent of established knowledge with respect to causes and consequences of the problem, as well as the existence of prior public regulation.

In sum, scholars have identified a range of determinants of the effectiveness of private governance institutions using different theoretical perspectives. Despite these different perspectives, many links between the arguments exist. The concluding section summarizes and compares the determinants identified by the scholars discussed above.

⁴⁶ Fuchs and Kalfagianni 2011.

⁴⁷ Note, however, that Starobin and Weinthal (2010) show that monitoring and certification are only under certain, rather restrictive conditions as helpful as one would intuitively expect them to be. Bütte (2010), in turn, points out that firms may be inclined to comply not because of existing compliance mechanisms, but because in the presence of accepted standards they may be found negligent in the case of an accident and therefore not covered by insurance. He also argues that compliance may be further fostered by the wish to "safeguard that privileged voice" that business tends to have in the design and negotiation of private governance institutions and their interaction with public governance institutions, although this wish may be counteracted by free-riding incentives (p. 20).

Conclusion

The above discussion has identified a range of determinants of the effectiveness of private governance from a variety of theoretical perspectives. The common findings among the different approaches suggest that a group of specific variables plays a central role in deciding this effectiveness. First, the presence of structurally dominant and visible players, particularly among the business actors appears to be important. Due to their structural dominance, these players are the most likely to be in the position to influence their supply chains. Due to their visibility, in turn, they are the most likely to experience pressure to improve their environmental conduct. This visibility, in turn, is a function of brand identities, firms' proximity to consumers, and their home base. However, the constraints for collective action on the side of civil society and the public with respect to the specific issue should not be underestimated in this context. Second, the types of actors initiating and participating in the private governance institution, as well as the extent of their influence within the governance of the institutions, are likely to have implications for its effectiveness. Third and not surprisingly, the structure of the problem addressed by the institution and the costliness of available solutions is a core variable. If we consider the outcome of private environmental governance rather than the output, moreover, the stringency of a standard and its institutional embedding are likely to play important roles.

Gathering information on the determinants of the effectiveness of private environmental governance is important for two reasons. First, this information will allow us to better decide under what conditions a positive contribution of private governance to sustainability is likely. Thereby, we gather insights into the probability that a given private environmental governance institution is likely to solve a particular problem and into the need for public intervention in this case. Second, this information allows us to better understand what the overall probability of such positive contributions of private environmental governance institutions is and therefore arrive at a better understanding of the fundamental role of private environmental governance in the overall political game.

Considered from this perspective, the determinants of the effectiveness of private environmental governance identified above tell us not only under what conditions effective private governance is likely, but also under which conditions it is unlikely. Importantly, many of the studies cited above concur that the latter conditions rarely exist and that, therefore, only a limited extent of effective private governance can be expected overall.⁴⁸ If we contrast this finding with the political and scholarly hype about private governance, reflected in conferences and workshops, publications, the creation of professorships and research centers, one has to wonder whether private (environmental) governance is simply to a large extent a hope unfulfilled or a political red herring.

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⁴⁸ For example, Mayer and Gereffi 2010; Starobin and Weinthal 2010; and Fuchs and Kalfagianni 2011.

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24 Private actors and strategies in global environmental governance: the role of information disclosure

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From carbon trading to labor and environmental standards, we are witnessing the emergence of international institutions and sources of authority that touch many aspects of business operations. These structures of global governance – rules, norms, codes of conduct, and standards – constrain, facilitate, and shape business behavior and the markets in which businesses operate.¹ Simultaneously, larger companies and industry associations are increasingly engaged in the development of the structures and processes of global environmental governance (GEG), in collaboration as well as conflict with governmental agencies, multilateral institutions, and nongovernmental organizations (NGOs). Indeed, the increasing recognition that markets themselves are powerful mechanisms of GEG highlights the centrality of business, particularly larger multinational corporations (MNCs), within the complex fabric of environmental governance.²

Large firms, in their role as investors, innovators, information providers, manufacturers, purchasers, lobbyists, and employers, are critical players in developing the architecture of GEG. They coordinate extensive global value chains, shaping the geographic profile of production, trade, and their environmental impacts.³ They are frequently prominent in negotiating formal intergovernmental regimes, such as the Kyoto Protocol, and in technical and economic advisory panels to these regimes. They participate in quasi-private policy bodies such as the Trans-Atlantic Business Dialogue, which are becoming increasingly influential in trade and investment policy.⁴ They shape public debate through funding research centers, commissioning reports from consultants and NGOs, and through public relations and advertising campaigns. They participate in networks with private and public partners to establish standards, codes of conduct, and to promote particular technologies such as renewable energy or energy efficiency.

The production, research and marketing strategies and practices of large firms thus play a key role in shaping environmental policies, industry standards, and physical impacts. For example, the widespread deregulation of electric power markets and the privatization of water supply systems have changed the nature of governance in these sectors, shifting the burden of governance from the public to the private sphere, often with significant consequences for water quality and access, pricing, fuel mix, and greenhouse gas (GHG) emissions. Similarly, the technological and political strategies of leading oil, auto, and power companies have played a decisive role in climate change governance. Illustrating Falkner's conception of "technological power,"⁵ decisions by auto companies to pursue advanced diesel, hybrid, and pure electric vehicles pushed these technologies down the learning curve, increasing scale, improving

¹ Haggard and Simmons 1987.

² Levy and Newell 2002.

³ Gereffi et al. 2005.

⁴ Coen 1999.

⁵ Falkner 2005.

performance, and reducing costs. Similarly, decisions by oil companies such as Shell and BP to invest in wind and solar energy have significantly accelerated the development of those sectors. Of course, these decisions are taken within frameworks of expected regulation and policies, which are in turn shaped by corporate lobbying as well as by the evolving possibilities of technological and commercial viability.

This active corporate role in GEG is increasingly welcomed by governments and international organizations, which are enticed by the resources and expertise offered by MNCs and concerned at an international “governance deficit.”⁶ International economic integration, with its associated transnational environmental and social impacts, creates greater demand for coordinated responses that strain existing institutional capacity.⁷ Newell and Levy note that “the transnationalization of production and capital and the removal of trade barriers have themselves created the need for orchestrated institutional responses from states. For example, it is the global and transboundary nature of the trade in genetically modified organisms that gave rise to the need for a protocol on biosafety.”⁸ Haas suggests that a “new geopolitical reality is the growing complexity of a globalizing world, whose management requires more holistic or comprehensive policies.”⁹

The corporate role is legitimated through the prevalence of neoliberal discourses of market-based solutions and competitiveness, complemented by (though sometimes in tension with) the discourse of corporate social responsibility (CSR) and stakeholder dialogue. This has led to a notable shift in the relationship between business and NGOs around regulatory issues. From a position of clear antagonism, there is increasing emphasis on partnerships and institutionalized forms of collaboration.¹⁰ Contemporary MNCs are thus increasingly embedded in webs of relationships that provide varied forms of governance across wide areas of economic and social life. They are political actors, in the broad meaning of the term, blurring distinctions between market and nonmarket activities.

Contested Hegemony in GEG Systems

Environmental arenas such as the energy system and climate change are complex sociotechnical systems, and in this context GEG can be viewed as a multi-actor and multilevel system of rules, standards, norms, and markets that stabilize these systems in particular ways. Understood this way, governance does not necessarily guarantee an outcome that serves the public interest; indeed, the differential power and interests of key actors ensures that the public interest is only one of many goals served by governance. A corollary is that governance is not an external superstructure that regulates a field from the *outside*;¹¹ rather, it comprises the actors, relationships, and processes that shape the functioning and reproduce the structures of a field. Governance systems are integrated economic, political, and discursive systems, in which market and political power are intertwined.

The Gramscian concept of hegemony is useful to describe the contingent stability that GEG brings, as well as the potential for actors to contest (and collaborate) over system governance and the distribution of benefits. Hegemony refers to a state of relative order based on an alliance

⁶ O'Brien et al. 2000; and Falkner 2005.

⁷ Slaughter 2004.

⁸ Levy and Newell 2006, 161.

⁹ Haas 2004, 2.

¹⁰ Newell 2001.

¹¹ Smith and Sterling 2006.

of dominant players and an alignment of political, economic, and discursive forces. The notion of hegemony, in this sense, is similar to the concept of field stabilization in organizational theory,¹² and conveys a degree of consent and acquiescence to a negotiated outcome. GEG arenas resemble contested organizational fields in which actors struggle over the construction of economic relationships, institutional rules and norms, and discursive frames,¹³ though hegemonic stability suggests mechanisms that stabilize and reproduce a dominant alliance and asymmetric outcomes.

This concept of hegemony as contingent stability is well illustrated in the inertia evident in the carbon intensity of global energy and transportation systems. Unruh uses the term “carbon lock-in” to refer to the “interlocking technological, institutional and social forces ... that perpetuate fossil fuel-based infrastructures in spite of their known environmental externalities.”¹⁴ Lock-in is, in part, an economic and technological phenomenon. Incumbent firms have substantial capabilities and assets tied to existing technologies, and benefit from a variety of barriers to entry relating to infrastructure, branding, patents, and economies of scale and learning, that protect them from low-carbon competitive threats. Stable governance systems have an important economic dimension, and are predicated on “business models” that secure the participation of various actors, by generating profits for firms and investors, wages for labor, taxes and economic growth for governments, and demand from consumers.

The economic and technological advantages of the fossil-fuel-based system are complemented and reinforced by its political structure, a powerful array of organizations with a vested interest in the status quo, which Unruh calls a “Techno-Institutional Complex,” including unions, standards organizations, business associations, and governmental agencies that frequently align their interests with the sectors they regulate and support. The political influence of fossil-fuel-related industry associations is legendary, of course.¹⁵ The climate issue itself accelerated the development of cross-sectoral, issue-specific business associations, such as the Global Climate Coalition. The political economy of the network thus shapes the structures of property rights, land use, labor law, environmental policies, trade and investment policy, and subsidies.¹⁶

Norms, routines, and cultural values that form the discursive dimension of the fossil-fuel energy system are also important sources of stability. Consumer preferences for private transportation, for frequent air travel, for large powerful cars, and for spacious air-conditioned homes are conditioned by cultural values and practices. Just as markets are constructed *within* particular political and social contexts, they also shape these contexts. The consumer culture that glorifies private cars and jet travel did not arise in a vacuum; corporate advertising, news, and entertainment play a crucial role in forging consumer identities, norms, and attitudes.¹⁷ Cultural production is also largely in the hands of private business, of course, with the industry characterized by rapid growth, increasing concentration, globalization, a decline of public control, and strengthening of intellectual property rights. The discursive dimension of the energy system is intricately linked to its political economy.

Hegemonic governance systems are based on fragile alliances, and are often beset by internal tensions and contestation. In the energy and climate case these tensions have been driven by

¹² Levy and Scully 2007.

¹³ Rao et al. 2000; and Maguire et al. 2004.

¹⁴ Unruh 2000, 818.

¹⁵ Gelbspan 1997; Leggett 2000; and Levy and Egan 2003.

¹⁶ Goodell 2006.

¹⁷ Ewen 1988; Lash and Urry 1994; Mosco 1996; and Paterson 2007.

the rising economic and political power of the clean energy sector, NGO pressure, the expectation of carbon regulation, and an awareness of potential “win–win” opportunities for firms in energy efficiency and low-carbon technologies.

The emergence of private actors such as MNCs, NGOs, scientific communities, and policy networks as powerful players in global governance has been widely, though not uniformly, welcomed. The diffusion of authority is widely perceived to represent a positive development that promises greater democracy, accountability, and capacity in solving problems requiring collective action at the international level.¹⁸ Keck and Sikkink argue that the networks constructed by economic actors, firms, scientists, and activists multiply channels of political access and make international resources available to actors in domestic struggles, helping to level the playing field.¹⁹ Similarly, Florini contends that “the information revolution increases the capacity of nonstate actors relative to state and corporate actors.”²⁰ The participation of civil society led Murphy and Bendell to coin the term “civil regulation” to refer to the pressure for business to comply with norms and standards advocated by civil society actors: “We believe that civil society organizations are also playing significant roles in promoting environmental and social management. The evidence of anti-logging, anti-oil and anti-child labor protests illustrates that NGOs are increasingly setting the political agenda within which business must work.”²¹

The prominence of business actors in GEG has also provoked critics to highlight the corporate–economic logic and goals of private governance. Cutler et al. observe that “a significant degree of global order is provided by individual firms that agree to cooperate, either formally or informally, in establishing an international framework for their economic activity.”²² These frameworks increasingly comprise voluntary private informational systems, such as the 4C industry code for coffee,²³ standards for social and environmental reporting such as the Global Reporting Initiative and the Carbon Disclosure Project, or product labeling standards such as the Forestry Stewardship Council.²⁴ Cutler et al. use the term “private regime” to refer to “an integrated complex of formal and informal institutions that is a source of governance for an economic issue area as a whole.”²⁵ Although they recognize that private authority ultimately derives sanction and legitimacy from the state and society, they express concern with the blurring of boundaries between the state and private authority.

Ougaard echoes this point in emphasizing the lack of democratic accountability in voluntary, private efforts: “When corporations engage in voluntary efforts, they make decisions on the allocation of scarce resources for public purposes.”²⁶ Corporations often prefer more private forms of governance because self-regulation can serve to accommodate external pressures, construct the firm corporation as a moral agent,²⁷ deflect the threat of regulation, and marginalize more radical activists.²⁸ These tensions in GEG between democratic accountability

¹⁸ Slaughter 2004; and Lipschutz 2005.

¹⁹ Keck and Sikkink 1998.

²⁰ Florini 2000, 28.

²¹ Murphy and Bendell 1999, 57.

²² Cutler et al. 1999, 3.

²³ Kolk 2005.

²⁴ Dauvergne 2005.

²⁵ Cutler et al. 1999, 9.

²⁶ Ougaard 2006, 43.

²⁷ Marchand 1998; and DeWinter 2001.

²⁸ Shamir 2004.

and a more private, corporate managerialism are not mere academic debates but also represent active contestation over field-level governance. As Ougaard puts it in relation to corporate social responsibility, “the CSR movement is a discursive and material struggle about business practice; it represents a politicization of the social content of the institutions that govern private economic activity.”²⁹

Information as Governance: GRI and CDP

The institutionalization of standardized non-financial reporting (NFR) systems, such as the Global Reporting Initiative (GRI) and the Carbon Disclosure Project (CDP), is a key element of GEG and serves a number of governance functions. Carbon disclosure, for example, is important for regulatory compliance, for structuring markets, and for creating normative pressures on business. In 2009, the US Environmental Protection Agency (EPA) issued a requirement that facilities emitting large quantities of GHGs collect emissions data and submit annual reports.

Companies subject to mandatory cap-and-trade programs such as the European Trading System are required to measure their carbon emissions in order to ensure compliance. Carbon accounting systems are also integral to carbon markets, corporate carbon management, and assessment of carbon-related risks in equity and debt markets. Finally, standardized information can be used for benchmarking and ranking, providing a channel for transparency and accountability while enabling NGOs and government agencies to demand certain performance levels, reward practices considered socially responsible and exert pressure on poor performers.³⁰

Information disclosure can be viewed as a pervasive mode of power that emanates from the constitutive and disciplinary effects of discourse.³¹ NFR thus represents a set of discursive texts and practices that construct corporate and NGO subjectivity, while promoting CSR as a domain of legitimate action. Practices of social auditing and reporting represent a form of discipline that functions to standardize, rank and categorize performance. This moment of “examination” represents, for Foucault, “a normalizing gaze, a surveillance that makes it possible to qualify, to classify and to punish.”³² The specific form taken by these standards and reporting mechanisms reflects their discursive lineage from corporate financial accounting systems and their embeddedness in wider structures of governance.

NFR, as a mode of GEG in which private, voluntary efforts are prominent, also presents the same tensions and contested logics that characterize the growing importance of private actors in GEG more generally. Advocates view information disclosure as a logic of “civil regulation,” a mechanism to improve democratic accountability and empower civil society groups to play a more active and assertive role in corporate issue-level governance. The success of the 1987 Toxic Release Inventory in reducing toxic emissions from industrial plants in the United States is often cited to support this approach.³³ Corporate managers, by contrast, tend to emphasize the logic of “sustainability management,” highlighting the instrumental value of social reporting to corporate management, the investor community, as well as auditing and consulting firms. These tensions are evident in both the GRI and the CDP.³⁴

²⁹ Ougaard 2006, 236.

³⁰ Florini 2003; Fiorino 2006; and Mol 2008.

³¹ Hewson and Sinclair 1999.

³² Foucault 1977, 184.

³³ Graham 2002.

³⁴ Levy et al. 2010; and Knox-Hayes and Levy 2011.

Strategic Intervention in a Governance Field

The actors who founded and promoted both the GRI and the CDP conceived these initiatives as deliberate interventions in the field of social and environmental reporting. Indeed, some GRI supporters saw the goal as not just changing corporate practice, but more fundamentally to shift the balance of power in corporate governance and related arenas toward civil society. The explicit goal of the GRI was to harmonize the NFR practice, thereby empowering various societal actors. The 1997 draft paper stated,

The GRI vision is to improve corporate accountability by ensuring that all stakeholders – communities, environmentalists, labour, religious groups, shareholders, investment managers – have access to standardized, comparable, and consistent environmental information akin to corporate financial reporting. Only in this fashion will we be able to (1) use the capital markets to promote and ensure sustainable business practices; (2) measure companies' adherence to standards set from Ceres principles; and (3) empower NGOs around the globe with the information they need to hold corporations accountable.³⁵

In a similar way, the CDP was intended to have value for investors, reporting companies, and for NGOs. While the CDP was conceived as a private, voluntary system, an implicit goal was to create the political space for regulatory initiatives, and its relationship to compliance gives carbon disclosure a more hybrid character.

These disclosure initiatives were conceived as non-confrontational strategies that could develop collaborative partnerships to serve mutual interests, while shifting norms, focusing managerial attention, and mobilizing pressure from investors, peers, and activists for companies to change their norms and practices. The NGOs promoting information disclosure appear to have understood the dangers of a direct confrontation with well-entrenched GEG systems encompassing powerful actors and sedimented belief systems. Instead, they pursued what Gramsci termed a “war of position,” a dynamic long-term strategy, to gain legitimacy, secure resources, develop organizational capacity, and win new allies.

The entrepreneurs behind these disclosure initiatives employed several strategies to negotiate the tensions between the logics of civil regulation and corporate environmental performance. First, they relied on the ascendant win-win logic of corporate environmentalism and CSR, in which interests are congruent rather than conflictual, to frame NFR as mutually beneficial. Notably, the groups behind these initiatives did not pitch the value of disclosure just in terms of their own agendas of improving environmental performance and increasing corporate accountability. Rather, they forged a wider coalition, including powerful business and financial actors, and attempted to appeal to the diverse interests and goals of these actors. In Gramscian terms, information disclosure constructs and promotes the common interest, facilitating the emergence of a governance system with a hegemonic alliance of actors.

To appeal to the material interests of investors and corporate managers, the GRI and the CDP highlighted the value of standardized reporting, reputational benefits, and reduced compliance costs and environmental risks. Indeed, the core strategy for the CDP was to recruit institutional investors who in turn would pressure companies in which they invest for carbon disclosure. By 2009, the CDP had signed up 475 investors with a total \$55 trillion under management. An important legitimization strategy for both initiatives was to frame information disclosure as analogous to established financial governance systems such as the Financial Accounting

³⁵ Ceres 1997.

Standards Board Interpretations in the United States.³⁶ For businesses wary of mandatory disclosure, the voluntary aspects of these mechanisms of disclosure were very attractive, providing flexibility in implementation with little legal exposure. Accounting and consulting firms also realized that social and environmental reporting potentially represented a vast new market for measuring, reporting, and auditing non-financial information.

Dominance of Corporate Logic in Information Disclosure

Though information disclosure is a contested field of governance, the corporate logic of “sustainability management” increasingly pervades the field. This is likely due to the power balance among the actors in the field and the strategic compromises adopted by advocates of information disclosure. The stakeholders who derive the most tangible economic benefits from NFR initiatives such as the GRI and the CDP are the auditors, consultants, and certifiers of corporate social performance reports. Traditional accountancy firms, who lost substantial chunks of their consulting business in the wake of the Enron and WorldCom scandals and ensuing financial regulation, have been eager to develop the market for non-financial information systems, auditing, and reporting. PwC and KPMG have been the main competitors in this market segment, which emphasizes the verification of managerial processes and reports but does not generally attempt to *assess* sustainability performance. Nonprofit consultancies, such as AccountAbility and Forum for the Future, provide a broader range of services to companies related to improving, measuring, and assessing their social and environmental performance.

The GRI founders understood from the beginning the strategic potential for enrolling auditors and consultants, and they have remained among its most active participants and supporters. Carbon disclosure has likewise attracted the attention of accounting and consulting firms, and has spawned a number of more specialized software firms who develop corporate carbon management systems. Recently, some of these carbon software firms have been acquired by larger, more established business information system firms, suggesting the mainstream acceptance of these practices. Actors who thrive from the financialization of carbon thus enjoy considerable power in structuring carbon information systems and enjoy a privileged position in carbon governance.³⁷

Activists and NGOs, by contrast, appear to be losing interest in NFR as a strategic lever. Levy et al. report that at the 2008 GRI annual meeting only 60 participants represented NGOs and four represented labor out of a total of more than 1,000 attendees.³⁸ The information in GRI reports is generally not particularly useful for activist campaigns because much of it is qualitative and difficult to compare across sectors and firms. Similarly, carbon disclosure is moving toward a format supporting mandatory compliance and corporate management’s needs for internal carbon measurement and control over energy costs. The CDP is losing out to corporate carbon and energy software systems, because the CDP reports carbon emissions data as organizational aggregates, which are not useful for managers who need to control energy costs at the facility and process level.

Moreover, aggregate data are hard to interpret across different industrial sectors and are not particularly useful for either investors or NGOs. In addition to quantitative disclosure of

³⁶ Etzion and Ferraro 2010.

³⁷ Bumpus and Liverman 2008; and Knox-Hayes and Levy 2011.

³⁸ Levy et al. 2010.

emissions, the CDP reports use a narrative format to portray the extent to which firms are conducting carbon inventories, preparing for trading, investing in mitigation technologies and establishing managerial responsibilities. Nevertheless, companies are still wary that the CDP represents an activist agenda. Despite the talk of information disclosure initiatives representing multistakeholder initiatives, the information systems are increasingly shaped by accounting and consulting firms to address the needs of client companies for reputation and risk management, and improved operational efficiency.

Discussion and Conclusion

While NFR has not transformed GEG or corporate practice, it has scored important strategic gains that should be acknowledged. It has generated legitimacy for the principle of disclosure and accountability to external stakeholders, and increased the visibility and voice of environmental advocates inside and outside corporations, and among multilateral institutions. The carbon disclosure movement, in particular, has generated considerable momentum toward the formalization of carbon accounting standards, which are crossing over into the regulatory apparatus of agencies such as the Securities and Exchange Commission and the EPA. Perhaps most importantly, carbon disclosure has demonstrated the feasibility and potential benefits of carbon management to policy-makers and business, shifting the field of play and opening political space for further action.

Despite the widespread enthusiasm for private modes of governance, there are clearly some major limitations. The effectiveness of voluntary disclosure systems is weakened by the focus on managerial processes rather than outcomes, the lack of comparability across firms and sectors, and the lack of sanctions for non-compliance.³⁹ Gupta notes that information is not neutral; the political economy of NFR leads to “conflicts over the source and nature of disclosed information, differing perceptions of its accessibility, usability, affordability and comprehensibility.”⁴⁰ Mason cautions that “The normative agenda here, often un-examined, is the scaling back of mandatory environmental regulation (nationally and internationally), the privatization of environmental resources, and the framing of information disclosure options in terms of individual lifestyle.”⁴¹ The dominant position of business and finance in information disclosure exemplifies Barley’s concern regarding the “privatization of functions that have historically been the mandate of local, state, and federal governments.”⁴²

Carbon disclosure, for example, attempts to institutionalize best practices on the assumption that companies will then manage and reduce their emissions. Yet, as with financial accounting systems, carbon measurement and reporting has sufficient flexibility to shield companies from strong forms of accountability. In the absence of a significant carbon price, with consumers who are apathetic or confused, and investors unsure about the relevance of carbon information, carbon disclosure systems do not necessarily translate into substantial reductions. Indeed, this is acknowledged in a 2010 CDP report that pointed to a “carbon chasm” between national targets of GHG reductions between 15 and 30 percent by 2020, and the carbon commitments of the SandP100, the 100 largest companies based in the US, which average an increase of about 4 percent over the same time period.⁴³ The lack of standardization or regulatory oversight

³⁹ Gupta 2008; and Mason 2008.

⁴⁰ Gupta 2008, 5.

⁴¹ Mason 2008, 10.

⁴² Barley 2007, 214.

⁴³ See https://www.cdproject.net/CDPResults/65_329_219_CDP-The-Carbon-Chasm-Final.pdf.

in carbon markets has created significant allegations of abuse and fraud that have plagued the European Trading System and the Clean Development Mechanism.

The increasing dominance of a corporate logic in information disclosure is unsurprising, given that it resides within a wider “transnational space” of financial, corporate, and state governance that is constituted and structured by transnational elites, institutions, and ideologies.⁴⁴ For Morgan this transnational space comprises transnational corporations, regulatory agencies, and cognitive and normative frameworks that “have to be conceptualized in terms of the interplay between top-down projects of transnationalism, pursued by powerful actors, and bottom-up processes of mutual identification and collective awareness.”⁴⁵ Morgan points to the crucial role of the business press and business schools in creating a sense of common identity and interests, a shared understanding of business practices, and providing points of access to transnational networks.⁴⁶ Olds and Thrift use the term “cultural circuit of capital” to refer to the flows of knowledge, ideas, and values that bind together “global assemblages” of actors and economic practices. Alongside business schools and consultancies, they also point to the role of the media as “key means of transport, amplifiers, and generators of business knowledge.”⁴⁷ Olds and Thrift argue that states are also mobilized within this cultural circuit of capital to assume the mantle of securing economic growth and national competitiveness, to which end they endeavor to produce “pliant but enterprising subjects.”⁴⁸

The very strategies that enabled the successful launch of NFR systems contained tensions, contradictions, and compromises that later emerged as significant constraints that circumscribed more systematic transformation. The strategy of promoting win-win discourse and positioning NFR as an extension of financial accounting helped to win powerful corporate allies and gain mainstream acceptance, but also resulted in the dominance of corporate actors and a market-oriented managerialist logic. This does not mean that the strategy was misconceived; NFR would have made little progress had it directly challenged the primacy of profit maximization, the legal rights of shareholders, or the conventional corporate governance structure that excludes representatives of the community, the environment, or labor. The NFR strategy recognizes that it is easier to create change within nested subsystems than the more entrenched and resilient broader institutions of capitalism, particularly financial markets and legal structures of corporate governance.

NGOs wishing to effect more fundamental change in structures of global environmental governance thus face a difficult dilemma. The success of NFR is counterbalanced by the risk of cooptation and assimilation within these structures rather than transforming them. This does appear to be the emerging outcome. Companies are frequently willing to embrace NFR as a demonstration of their social concern but have proven unwilling to tolerate a system that provides clear measures and rankings of their social and environmental performance. Moreover, NFR does not appear to be affecting core product or market strategies. Yet the terrain of governance has shifted, opening new possibilities for future challenges.

⁴⁴ Faist 2000.

⁴⁵ Morgan 2001, 118.

⁴⁶ Morgan 2001, 125.

⁴⁷ Olds and Thrift 2005, 274.

⁴⁸ Olds and Thrift 2005, 275.

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25 Business power, business conflict: a neo-pluralist perspective on international environmental politics

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What effect has economic globalization had on the international politics of environmental protection? This question has been at the center of a rapidly growing political economy literature on the links between global economic forces and the state of the global environment. One set of answers to this question revolves around the many ways in which global economic integration has created new, or aggravated existing, sources of environmental degradation. Scholars have examined the progressive liberalization of trade, investment, and finance in recent decades and have identified a number of causal mechanisms that link these trends with the global environmental crisis.¹

Another set of answers has focused on the political consequences of globalization. In this perspective, the growth of ever denser webs of economic interaction has not only altered humanity's physical relationship with the natural environment but has also transformed the international political process through which societies seek to address environmental problems. One particularly rich stream of scholarship that has emerged in this context has examined the increasingly active and powerful role of business actors in international environmental politics.²

This chapter focuses on this second strand of research. It introduces and discusses the neo-pluralist perspective on business power.³ Neo-pluralism offers a distinctive approach to studying global political change in an era of economic globalization. As I shall argue below, it offers important insights into the changing conditions of business power in the field of global environmental protection. By highlighting the political agency of corporations and the potential for business conflict, neo-pluralism grounds the study of global environmental politics in a political economy perspective while pointing to the essentially open-ended nature of global political processes. Globalization, in this view, leads to a restructuring of global politics and the creation of new transnational networks and webs of power, thereby favoring those actors that can operate at the trans- and international level. Global business is one of the main beneficiaries of the reconfigured power relations that globalization has produced. However, due to the inherent instability of collective business interests and transnational coalition building between different types of actors, business as a whole does not predominate. Instead, globalization has promoted what Cerny refers to as the "pluralization of world politics."⁴

This chapter is structured in the following way. The next section introduces the neo-pluralist perspective in international political economy. The subsequent section describes the core tenets of the business conflict model that is at the heart of the neo-pluralist perspective on business power. It distinguishes between three types of business conflict that can be observed in

¹ For an overview of this literature, see Clapp and Dauvergne 2011.

² Levy and Newell 2005. See also the contributions to this Handbook by Finger and Svarin, ch. 22; Fuchs and Kalfagianni, ch. 23; Levy, ch. 24; and Gulbrandsen, ch. 26.

³ This chapter builds on Falkner 2008.

⁴ Cerny 2010, 8.

environmental politics: between national and international businesses; between technological leaders and laggards; and between different companies and sectors located at different points of transnational supply chains. The penultimate section considers the circumstances that shape business involvement in international environmental politics. A final section concludes.

Neo-pluralism

That business plays an important, and increasingly influential, role in international environmental politics is widely accepted in scholarly and public debates. From the direct and often visible forms of business lobbying to the more indirect forms of corporate influence on overall economic activity and the direction of technological change, there are plenty of indicators that suggest a growing corporate engagement with the global politics of the environment.⁵ How to interpret this engagement and assess its impact remains a matter for debate. For some, corporations are just one type of actor in a complex and fluid field of political interaction. They compete with other interest groups for influence, and their success is largely determined by the relative strength of their financial and organizational resources. For others, corporate power rests on more than just lobbying strength. In their view, corporations exercise structural power, which allows them to constrain political actors and determine the broad direction and scope for political action. They may not be able to dictate every single outcome of the political process, but their central role in the economy allows them to exercise a dominant influence.

These two principal perspectives on business power are broadly based on the pluralist and structuralist traditions in political science and international political economy. They represent the polar ends of a spectrum of theoretical positions in the study of interest group politics and business power. Somewhere in between these sits the neo-pluralist perspective, which seeks to bridge the gap between pluralism and structuralism and offers a distinctive vantage point from which to analyze business involvement in international environmental politics. Its core argument is that while business is in a powerful and indeed privileged position among interest groups, it does not determine outcomes in the policy process. Divisions within the business community and countervailing forces outside it make for a more fluid and open-ended political process. Business interests do not always pull in the same direction, nor do they control the global political agenda.

The American political scientist Charles Lindblom laid the intellectual foundations for the neo-pluralist synthesis in the 1970s. In his widely read *Politics and Markets*, Lindblom famously stated that “businessmen occupy a privileged position” in liberal democracies.⁶ This privileged position came about because business performs a key role in stimulating growth, employment, and innovation in the economy. In a democratic–capitalist system, state leaders have no choice but to create a business-friendly environment if they wish to be re-elected, and their attempts to regulate business for social, environmental, or other reasons need to respect certain boundaries that are largely set by economic actors. Business can thus not be treated just like any other interest group as is the case in the pluralist tradition of political science.

By defining the domestic political role of business as privileged, Lindblom acknowledged the criticisms that structuralist power theorists of the 1960s and 1970s had leveled against pluralism.⁷ But he rejected their deterministic conclusions and introduced a dimension of

⁵ For recent studies on corporate involvement in global environmental politics, see Vormedal 2008 and forthcoming; Bled 2009, 2010; and Bouteligier 2011.

⁶ Lindblom 1977, 175.

⁷ Bachrach and Baratz 1970; Lukes 1974; and Miliband 1976.

structural business power into the study of pluralist interest group competition. The resulting neo-pluralist synthesis envisages business actors as playing a potentially dominant role, given their unique access to financial resources and critical role in directing economic activity. At the same time, however, it highlights the potential for division within the business sector and the importance of countervailing forces outside it. In seeking to understand the conditions for business power and influence over political outcomes, neo-pluralism focuses not only on the internal logic of capitalism but also on the historically contingent constellation of interests within the business community as well as interactions between business and other actors.⁸

Although Lindblom did not apply his theory directly to the international realm, the notion of a privileged position of business is closely connected to the international economic transformations brought about by globalization. In an era of ever-freer trade, financial liberalization and transboundary investment flows, business power rests to a great extent on its ability to move capital abroad. Indeed, the idea that globalization empowers business by strengthening its “exit” option has given rise to a large literature on the global power shift from states to markets.⁹ But while this hyper-globalist thesis seemed to capture the mood of the 1990s, it has since given way to more nuanced analysis of the often complex and contradictory trends set off by global economic integration. Nor have states had to abandon their policy autonomy in key areas such as welfare spending nor have they lost their ability to set regulatory frameworks for the international economy.¹⁰ Furthermore, new actors, such as transnational activist groups, have come to challenge the legitimacy and authority of business actors and have established new forms of social control over transnational economic activities.¹¹ Such trends do not negate the power of business actors, but point to the more complex and ultimately open-ended nature of globalized policy processes.

Business Conflict

The business conflict model plays a central role in the neo-pluralist perspective. Put simply, it assumes that, despite sharing certain underlying interests, the business community is not a unified bloc when it comes to international policy-making. In international environmental politics as much as in other global policy areas, business interests diverge because proposed policy measures create differential effects on individual companies or industrial sectors. For example, measures to reduce carbon emissions may harm fossil-fuel-dependent industries but create market opportunities for clean energy providers; the introduction of mandatory environmental management systems will be less onerous for those companies that already adhere to their own voluntary standards; and the raising of fuel efficiency standards in the automobile industry will be less costly to technologically advanced car manufacturers than those that lag behind their competitors.

Any form of environmental regulation can have such differential effects. Whether it is in the form of mandatory technology standards, efficiency or emission targets, certification schemes, disclosure and transparency rules, or emission trading systems, most policy interventions that seek to reduce environmentally harmful economic activities are bound to harm one type of business actor more than another. This is, of course, their intended effect. If environmental regulation is to reduce or prevent pollution, it needs to create incentives for those companies

⁸ For an overview of neo-pluralism in political science, see McFarland 2004.

⁹ Andrews 1994; and Strange 1996.

¹⁰ Garrett 1998; Keohane 2002; and Drezner 2007.

¹¹ Keck and Sikkink 1998; and Tarrow 2005.

that cause pollution to change their behavior. Creating differential regulatory effects is thus part and parcel of effective environmental governance. Unsurprisingly, therefore, business actors define their environmental policy preferences to a large extent in response to how they are likely to be affected by proposed regulations, whether at the national or international level.

To be sure, the formation of business interests is in itself a complex process and cannot be reduced to a mere calculation of regulatory effects. Companies form policy preferences in specific historical contexts that are informed by political traditions and cultural norms. Interests are often filtered through political institutions and ideational structures, as historical institutionalists and constructivists have shown.¹² Furthermore, interest formation is never just a one-way street. As Woll has argued in her study of business preferences in trade policy, “business demands result as much from government action as policy decisions respond to business demands.”¹³ It therefore matters how governments and societal actors define environmental policy objectives, and how political institutions structure the interaction between interest groups and the state. Indeed, the different US and EU business attitudes to environmental concerns are illustrative of the importance of the broader social and political factors that shape business interests.¹⁴ Business conflict models thus need to be sensitive to the wider social and political field within which business interests are formed.

But if used as a first-cut analysis, the differential effects of environmental policy provide the analyst with an essential starting point in determining the likely patterns of business interest formation and conflict configurations. The word “potential” is significant in this context, for it cannot be assumed that business conflict is always present in business–government relations. Whether divergent interests translate into actual business conflict depends on other factors: business preferences need to be translated into corporate political strategy;¹⁵ and strategy formation reflects the social and political field within which companies operate, as economic sociologists have argued.¹⁶ In climate change politics, for example, patterns of interest aggregation and coalition-building have played an important role in shaping companies’ involvement and influence in the creation of carbon markets.¹⁷

At least three principal types of business conflict can be identified in international environmental politics. They overlap to some extent with business conflict formations in other areas of international policy-making, such as international trade and finance, but also reflect the specific characteristics of international environmental governance.

National versus International Business

One of the basic divisions in the corporate sector is between national and international businesses, that is, between companies whose market is primarily national and those that operate across boundaries in several international locations. In general, the latter tend to be more supportive of the liberalization of trade and investment flows than the former.¹⁸ By the same token, international businesses are more likely to support the setting of international standards and regulations if these create a global level playing field or tilt it in their favor. They are more

¹² Katznelson and Weingast 2005.

¹³ Woll 2008, 19.

¹⁴ Levy and Newell 2000.

¹⁵ Hillman and Hitt 1999.

¹⁶ DiMaggio 2001; and Fligstein 2002.

¹⁷ Meckling 2011a, 2011b.

¹⁸ Milner 1988.

likely to view international regulatory harmonization as an opportunity rather than a threat, even if it involves the raising of regulatory standards overall. Of course, they may not support all forms of international regulation. But where international rules offer economic benefits, for example, by reducing the transaction costs of operating internationally or imposing higher costs of compliance on international competitors, global companies will be more likely to go along with them than national companies.

The international politics of ozone layer protection during the 1970s and 1980s offers a good example of how divisions between international and national industries shape the direction and impact of business lobbying.¹⁹ The producers of ozone-depleting substances (such as chlorofluorocarbons, or CFCs) operated in global markets and were actively involved in the international negotiations on the ozone regime. Once governments had shown their willingness to take regulatory action in an internationally coordinated fashion, the leading CFC producers gave up their initial opposition and decided to support the ozone regime. By contrast, most CFC user industries, which were predominantly nationally oriented, remained hostile to CFC regulation, whether national or international, for much longer. But because of their lack of involvement in the international process, they failed to influence the outcome of the ozone negotiations to the same extent as the CFC producers did.

In the early phase of the ozone debate in the 1970s, both CFC producers and users presented a united front in opposing precautionary restrictions on the use of CFCs. They rejected the underlying scientific basis for regulation and lobbied against regulatory restrictions in Europe and the United States, with only a few companies in the aerosol sector taking voluntary action to eliminate CFCs. By the early 1980s, however, momentum was slowly building for international action, and it was at this time that the united business front between international CFC producers and predominantly national CFC users began to break down.

In 1985, the main CFC-producing countries agreed to the Vienna Convention, which set a normative and political framework for future international action against ozone layer depletion. This was followed up with negotiations on a treaty with specific regulatory measures, which was eventually agreed in 1987 (Montreal Protocol). Having previously argued for an international level playing field, some leading CFC producers now reassessed their political strategy as governments geared up to negotiate specific regulatory restrictions. DuPont, the world's largest CFC producer, was the first company in 1986 to support international restrictions on the growth of CFC production. In 1988, it led the chemical industry to accept an eventual phase-out goal for global CFC production, and by the late 1990s nearly all CFC production came to an end in the industrialized world.

Unlike the CFC producers, many CFC user industries resisted regulatory restrictions. Having largely ignored the international process and accepted the leadership role of the CFC producers until the Montreal Protocol was agreed, user industries sought to block or at least slow down the domestic implementation of the treaty. Some CFC users were able to re-engineer their products or processes to eliminate CFC use altogether, but many were concerned about the costs of conversion and remained doubtful about the availability of reliable substitute chemicals. Overall, the fact that the global chemical industry dominated international lobbying and CFC user industries were slow to react to international developments allowed proactive governments to work closely with pro-regulatory international companies to establish and design the international ozone regime.

¹⁹ The following account is based on Falkner 2005 and 2008, chapter 3.

Technological Leaders versus Laggards

Business conflict over international environmental policy can also arise from divisions between technological leaders and laggards within a given sector. Companies that are leading innovators may find that international environmental regulation gives them a competitive advantage over their competitors. This can be the case where regulatory policies raise technical standards in an entire industry or create new market opportunities for environmentally friendly products or processes. The ability of some firms to react more quickly or cheaply to new environmental standards will influence their political strategy toward regulatory policies, and it is not uncommon to find technologically advanced companies actively lobbying for stricter and internationally harmonized environmental regulations.

A prime example of this type of business conflict can be found in the international politics of climate change. During the 1990s, especially in the negotiations on the 1992 UN Framework Convention on Climate Change and the 1997 Kyoto Protocol, business lobbying was dominated by a powerful fossil-fuel industry. Led by the oil and coal sectors but comprising a diverse range of large industrial companies, the Global Climate Coalition (GCC) played a key role in organizing business opposition to mandatory policies on reducing greenhouse gas emissions.²⁰ Dissenting business voices, such as those of the global insurance industry, were relatively weak and politically inexperienced at that time.²¹

The first divisions in corporate attitudes to climate change became more visible in the run-up to the 1997 Kyoto conference and deepened after the adoption of the Kyoto Protocol.²² While the GCC was disbanded in 2002 after it had lost a series of core members, a few more specialized business associations have continued to argue against any form of regulatory actions. But many sectoral and cross-sectoral industry associations have abandoned outright opposition to international regulation and are now seeking “to influence regulatory design and the adoption of favorable mitigation technologies and methodologies by Kyoto Parties.”²³ Other groupings, such as the International Emissions Trading Association, represent business interests that have benefitted from the creation of carbon markets. Their business depends on the adoption of mandatory mitigation measures. Unsurprisingly, therefore, they have played an active role in the development of emissions trading schemes in Europe and elsewhere.²⁴ Similarly, renewable energy companies have received a massive boost from international climate policy and are also seeking to strengthen the regulatory regime in the hope that this will promote the technologies and business models they have adopted.

These developments have profoundly altered the dynamics of business lobbying in international climate politics. Whereas in the early 1990s the business community largely opposed international regulatory action, progressive states and environmental groups can now count on significant business support for their demands for strong international action. New pro-regulatory networks have emerged that include state, business and civil society actors, and new forms of private climate governance have been developed at the sub- and transnational levels.²⁵

²⁰ Pulver 2002.

²¹ Paterson 2001.

²² Falkner 2008, 122–37; and Vormedal 2008, 39–44.

²³ Vormedal 2008, 40.

²⁴ Meckling 2011a.

²⁵ Pattberg and Stripple 2008.

Supply Chain Divisions

The third type of business conflict in international environmental politics arises between companies that are linked by a common supply chain but operate in different economic sectors. Supply chains, also known as production or commodity chains, are organizational fields that connect different companies in the production and distribution of specific goods or services. For example, retail companies source consumer goods from suppliers, which in turn may rely on other companies to manufacture these goods or produce component parts, while these source input factors such as raw materials from yet another range of industries. Such supply chains often cross several boundaries, depending on the degree of internationalization of the production and sourcing process. The key point about such supply chains is that they not only create networks of companies from different sectors (for example, retail, manufacturing, international trading, mining) but also give rise to structures of governance and power relations that operate across national boundaries.²⁶ Two principal types of governance structures can be distinguished: producer-driven chains, in which multinational corporations exercise control over the production process across the entire network (for example, Airbus); and buyer-driven chains, where powerful retail companies control decentralized networks of suppliers (for example, Walmart).²⁷

Where environmental rules or standards regulate specific products or markets, they usually target those companies that either manufacture or sell environmentally sensitive goods. Retailers and manufacturers normally pass on these new regulatory standards to their suppliers and other companies further down the supply chain. Because such regulatory changes can create differential effects on retailers, manufacturers, and other sectors, they may become the source of business conflict between companies operating at different points of the supply chain. For example, while companies at the consumer end of the chain may support higher regulatory standards in an effort to promote their corporate reputation for product safety and environmental responsibility, producers of consumer products or input factors may view such standards primarily as a source of higher costs rather than reputational gains.

The case of genetically modified (GM) food provides an example of business conflict along a global supply chain.²⁸ The production of GM food connects biotechnology firms as developers and providers of GM seeds, the farming sector, commodity trading companies, food producers, and supermarkets at the consumer end of the chain. Particularly in developed-economy markets with higher degrees of concentration in the food retail sector, supermarkets possess considerable control over the food supply chain and are able to set and enforce food safety-related standards. In the 1990s, this powerful position of supermarkets came to play a critical role in deciding the fate of GM food products in Europe.

After decades of laboratory development and field trials, biotechnology companies such as Monsanto started to introduce genetically modified crops to commercial production in North America. When the first GM crop shipments reached Europe in 1996, they were greeted with strong opposition by environmental groups and concerned consumer organizations. Fearful of the potential risks of GM crops for human health and biodiversity, campaigners sought to prevent GM crops being grown in Europe and GM food going on sale. By targeting European supermarkets as part of their anti-GM campaigns, they achieved a near-complete closure of the European market for GM food.

²⁶ Gereffi et al. 2005.

²⁷ Gereffi 1994.

²⁸ This account is based on Falkner 2009.

Supermarkets such as the UK's J Sainsbury and Safeway initially hoped to introduce GM products in clearly labeled packaging. When faced with a growing anti-GM campaign and newspaper headlines of "Frankenstein foods," they soon decided to eliminate all GM food products from their stores in an effort to avoid reputational damage from being associated with the controversial new food products. As early as 1998, supermarket chains in the UK and other European markets started to declare that they were eliminating GM content from their own food product range and were working with their supply chain to remove GM content from other food products as well.²⁹ Supermarkets acted voluntarily to go GM-free and used their retail sector power to force through changes in the food production and farming sector, thereby effectively forcing the closure of the European farming market to GM crop varieties. Despite the active lobbying of biotechnology farms and the support that agricultural biotechnology received in some parts of Europe's farming sectors, food retailers succeeded in eliminating virtually all GM food products from the European market even before more onerous *genetically modified organism* (GMO) labeling and traceability rules were introduced by the European Union in the early 2000s. Business conflict along the biotech food supply chain thus allowed environmental campaigners to halt the seemingly irresistible march of GM foods in Europe. It provided civil society groups with an opportunity to impose a voluntary non-GMO standard on the European food sector at a time when political authorities in Europe were deadlocked in their effort to reform the EU's regulatory system for GMOs.

Extending the Business Conflict Model

Having outlined the three main forms of business conflict in international environmental politics, we need to consider the circumstances in which such divisions impact on outcomes in the international political process. For it cannot be assumed that business interests translate directly into political forces, nor does the presence of business conflict in itself explain political outcomes. Instead, we need to connect the business conflict analysis with other factors that shape outcomes of international policy-making. Three aspects, in particular, need to be addressed in this context.

The first concerns the determination of business interests in specific historical contexts. Traditionally, political economy approaches have deduced corporate preferences from the competitive position that companies or entire industries find themselves in and from the effects that proposed international regulations would have on this position. In this view, economic structure determines preferences.³⁰ This serves as an important first-cut analysis but is insufficient. More recently, institutionalist and sociological theories of the firm have argued for a more nuanced view of corporate preference formation. They point to the social embeddedness of companies and the wider organizational environment in which companies form preferences.³¹ A sociological understanding of preferences directs our attention to the cognitive frames that inform companies' perceptions of their interests and the influence that societal values and political culture have on them.³²

A second aspect concerns the way in which corporate interests translate into corporate political strategy. This raises the question of political agency and political organization. Pursuing corporate political strategies is costly and requires a strategic approach to and

²⁹ Loader and Henson 1998.

³⁰ Rogowski 1989.

³¹ DiMaggio 2001; and Fligstein 2002.

³² For an application to the case of the oil industry and carbon capture and storage, see Tjernshaugen 2012.

understanding of international political processes. Not all companies develop or contribute to international lobbying efforts, and those interests that are inserted into the international process tend to be filtered through business associations and other forms of collective action. As Meckling has argued, the aggregation and organization of business interests through transnational business coalitions is in itself a source of power. It matters to the effectiveness of business lobbying as it allows companies to pool financial resources, channel lobbying more effectively towards state actors, and engage in multilevel lobbying and bargaining scenarios.³³

The third aspect relates to the notion of countervailing forces, which serve to counter business interests and power. The agency of other actors, particularly nonstate actors such as civil society groups but also state actors, plays a critical role in this regard. While traditional pluralist models tend to view interest group politics as a struggle for influence between business and civil society with the state being a neutral arbiter, the neo-pluralist perspective sees business conflict as opening up possibilities for political alliances between different types of actors. Thus, for social movement theorists business conflict provides “industry opportunity structures” that empower civil society groups in their political campaigns, giving them opportunities to form alliances with pro-regulatory business interests.³⁴ Likewise, state actors may seek to exploit or further divisions within the business community and engage with pro-regulatory business actors in an effort to shape the international policy environment.

Conclusions

Neo-pluralism offers a distinctive perspective on the increasingly important role that business plays in the global search for environmental solutions. In an era of economic globalization, global firms in particular have become powerful actors in international policy-making processes. Their critical influence over international investment flows, economic growth, employment, and technological innovation has given the corporate sector a privileged position in global politics. It is widely acknowledged that global problems such as climate change and biodiversity loss cannot be addressed effectively without the participation of business. But this does not mean that business groups determine outcomes in international politics. The international political process is too fluid and open-ended for it to be “captured” by the business sector. Nor is business united in its attempt to shape international outcomes. Significant differences exist with regard to specific regulatory policies that are being negotiated at the international level. Business conflict, in the form of a divergence of business interests and corporate political strategies, is an inevitable feature of business involvement in international environmental politics.

Identifying the sources of business conflict is an important element of a political-economic analysis of global environmental politics for at least two reasons. First, it provides a first-cut analysis of business interests and corporate lobbying dynamics, giving rise to a more nuanced understanding of the business sector as a diverse group of economic actors whose policy preferences respond to shifts in the international political landscape and specific regulatory policies. Second, it provides an important tool for the analysis of so-called “industry opportunity structures” that offer political opportunities to other nonstate actors. In their effort to tame business power and create alliances with pro-regulatory business interests, environmental campaign groups are either exploiting existing, or encouraging new, forms of business conflict.

³³ Meckling 2011a, 2011b. See also Bernhagen 2008, 84.

³⁴ Schurman 2004.

Likewise, state actors seek to weaken anti-regulatory business forces by promoting the emergence of pro-regulatory interests and forging alliances with them. By highlighting the interplay between business conflict and countervailing forces, neo-pluralism shows the limits of business power amidst a complex but fluid system of political coalition- and network-building in an era of economic and political globalization.

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26 Impacts of nonstate governance: lessons from the certification of marine fisheries

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Over the past two decades, a number of multistakeholder certification schemes have emerged and become particularly vibrant sources of nonstate governance. Sometimes referred to as the “privatization of governance,” these programs are generally seen as emerging in response to transboundary problems states have been unable or unwilling to resolve. Such programs have been launched to address environmental and social concerns in many sectors and industries, including forestry, fisheries, fish farming, coffee production, palm oil production, and parks management. They go beyond voluntary codes of conduct and self-regulatory modes of governing by requiring independent verification of compliance with performance-based environmental and social standards. They also constitute governing arenas in which a wide range of stakeholders interact and agree upon rules and governance mechanisms.¹

We know a great deal about the conditions that help to explain how these certification programs emerged and evolved within and across sectors, but much less about their direct effects and broader consequences. Using the Marine Stewardship Council (MSC) as a case study, this chapter examines how we can evaluate the effectiveness of nonstate certification programs and discusses what certification in the fisheries sector has taught us. In 2009, the MSC celebrated its first 10 years as an independent and operational certification program. Now in its second decade, the MSC is the most influential global environmental program for wild-capture fisheries certification. Given its experience of more than a decade of operations, it would be interesting to assess the MSC’s effectiveness in delivering on its promises to increase stock health and generate real benefits for the marine environment.

This chapter proceeds with a brief overview of the MSC certification program, before turning to the question of direct effects. This section outlines a common measure of effect: the number of certified fisheries, total certified catch, and proportion of certified wild harvest for human consumption. From these basic figures, the chapter discusses patterns of adoption, highlighting self-selection challenges in voluntary certification programs. Next in this section, a second dimension of direct effects is examined: the impact of certification on producer practices. From an examination of conditions issued by certifiers, I draw critical observations to discuss the environmental gains of the certification process. The next two sections examine unintended consequences of fisheries certification and the intersection of certification with government regulations, respectively. Finally, the conclusion reflects on the lessons learned from this appraisal of the effectiveness of fisheries certification.

The Establishment of the Marine Stewardship Council

There is a long history of international fisheries governance and a wide range of legally binding rules centered in recent decades on the 1982 UN Convention on the Law of the Sea. This

¹ See for example, Cashore 2002; Bernstein and Cashore 2007; and Gulbrandsen 2010.

convention, which entered into force in 1994, provides a legally binding framework for regulating use of the world's oceans and codifies the right of coastal states to establish 200 nautical mile exclusive economic zones. Despite important advances in fisheries governance, overexploited and depleted fish stocks increased from about 10 percent of overall stocks in the mid-1970s to around 25 percent in the early 1990s, where it has remained to the present.² The global imbalance between fish resources and harvesting capacity is the most serious environmental problem in the fisheries sector. Driven by the rapid growth of the world's fishing fleet, the harvest tonnage from capture fisheries quadrupled between 1950 and 1990, although it has since leveled off.³

In response to increasing concerns over the inability of governments to resolve the fisheries management challenges – and inspired by the success of the Forest Stewardship Council (FSC) in the forestry sector – the Worldwide Fund for Nature (WWF) exported the certification and labeling idea to the fisheries sector.⁴ In 1997, the WWF teamed up with Unilever, one of the world's largest buyers of seafood at the time, to establish the MSC as a market-based certification scheme for fish and fisheries products. To fend off assertions that the WWF and Unilever controlled the scheme, several steps were taken to establish the MSC as a fully independent organization, including the creation of an international Board of Trustees and the termination of seed funding from the two founding partners.⁵ It became an independent, nonprofit organization in 1999. Unlike the FSC, the MSC is not an open membership organization and ultimate rule-making authority rests with the Board of Trustees. In addition to the board, the governance bodies of the MSC include a stakeholder council, a technical advisory board, and a London-based international secretariat.

The principles and criteria of the MSC were developed in an extensive consultation process between 1996 and 1999 involving more than 300 organizations and individuals. It included two expert drafting sessions and a series of international workshops in various regions around the world. Agreement was reached on three main principles addressing the health of the target fish stocks, the impact of the fishery on the ecosystem, and the performance of the fishery management regime. These principles were supplemented by a number of more specific operational and management criteria. Independent certifiers develop scoring guideposts which determine what is required to get a passing score, and assess whether a fishery's performance measures up to the MSC's principles and criteria. Fishing companies or other clients for certification can select any accredited certifier; they also have to pay for the assessment process. A so-called "chain-of-custody" assessment must be conducted for the entire fish and fisheries product supply chain in parallel with or following the assessment of the fishery. The purpose of this assessment is to trace the products from "boat to plate" to ensure consumers that products carrying the MSC logo originate with a certified fishery.

Unlike the FSC standard, the MSC standard built on international agreements and guidelines, particularly the 1995 FAO Code of Conduct for Responsible Fisheries. Its role, the MSC states, is to complement and work alongside international fisheries regulations, not replace or supplant them. This linkage to international agreements is related to the dense regulatory context of the fisheries sector.⁶

² FAO 2007, 29.

³ FAO 2007, 6.

⁴ Gulbrandsen 2005.

⁵ Fowler and Heap 2000.

⁶ Gulbrandsen 2005.

Direct Effects of Certification

Extant research has demonstrated that the effectiveness of nonstate certification schemes must be measured along at least two dimensions: (i) patterns of adoption and (ii) impact on producer practices. The first dimension reflects the number and type of producer participating in the scheme as well as their share of potential membership within a sector or an industry. The second dimension reflects the strength and behavioral consequences of a certification scheme and, ultimately, its environmental and socioeconomic impact. A relatively high score on both these dimensions is necessary for a voluntary certification program to help resolve the problems it was created to address.

Patterns of Adoption

The proportion of certified producers or products traded is, for good reason, often used as a proxy indicator of the effectiveness of nonstate certification programs.⁷ Indeed, adoption of a certification program by a critical mass of producers is a prerequisite for environmental problem solving in many industries and sectors. A best-practice standard that could be achieved by only a small proportion of producers could deliver real environmental benefits among the few, but would not change industry-wide practices in ways that lead to improvements in the biophysical environment and socioeconomic benefits. In addition to considering such measures as the proportion of certified to uncertified producers, it is critical to examine *patterns of adoption*. Because participation in certification schemes is voluntary, it is possible that only producers who face relatively low adoption costs choose to participate. If producers who face substantial compliance costs were to systematically opt out of certification schemes, the net impact of certification would be low. The certification scheme might also fail to attract an appropriate geographical coverage or the types of producers needed to obtain its goals. All else equal, a scheme that attracts a large proportion of producers across geographical regions will be more effective than one with only a small proportion or certain types of producers.

What, then, can be said about the effectiveness of fisheries certification in terms of patterns of adoption? Arresting the decline of fish stocks through certification clearly requires the participation of a large proportion of the fisheries targeting those stocks. Despite a slow start, the number of MSC-certified fisheries rose dramatically toward the end of the program's first decade. In 2000, Western Australia's rock lobster fishery became the first to be certified to the MSC standards. This certification was followed by a small-scale herring fishery in the UK and the large-scale Alaska salmon fishery, comprising thousands of operators catching more than 350,000 tons of salmon annually.

The number of certified fisheries grew from three at the end of 2000 to 10 by the end of 2004, comprising a total catch size of around half a million tons. A major boost in supplies of certified volumes came in 2005, with the certification of the US trawl fishery for pollock in the eastern Bering Sea, after an assessment process lasting nearly four years. With an annual catch of one million tons, eastern Bering Sea pollock is by far the largest MSC-certified fishery. In 2005, this fishery accounted for two-thirds of the MSC-certified volume. Furthermore, MSC could rightfully claim to be a major player in the global whitefish market (hoki, hake, and pollock).⁸

Although the number of certified fisheries increased from 16 to 38 from 2005 to 2008, the certified volume only increased from about 1.5 million tons to just over 2 million tons of

⁷ Auld et al. 2008, 192.

⁸ Hoel 2006.

seafood annually. The MSC experienced rapid growth from 2008 onwards. By the end of 2011, there were 109 fisheries certified to the MSC and 135 more in some stage of full assessment. These fisheries record annual catches of over 7 million tons of seafood – 12 percent of the global wild harvest for human consumption. Certified seafood is used in nearly 5,000 different MSC-labeled products in 66 countries.⁹ The MSC-certified fisheries represent close to 50 percent of the whitefish market, more than 40 percent of the wild salmon market, and about 18 percent of the lobster market. For other fish species, the market share of certified products is much lower; only 0.5 percent of the tuna market is certified, for example.

Despite the MSC's impressive growth, an examination of patterns of adoption demonstrates that certain types of fisheries are overrepresented in the program. In an early appraisal of the 11 fisheries first certified by MSC, Kaiser and Edwards-Jones highlighted how they differed from most of the world's fisheries.¹⁰ They found that the certified fisheries were "highly selective for their target species," had "stocks that occur within known areas for which there are exclusive national rights," had "limited access," were "well regulated and enforced," "often [involved] co-management between government, scientists, and fishers," and were either relatively small or relatively large. In contrast, most fishers in most regions of the world have no significant input into the management process; they share the fish resources with unassociated fishers or multiple fishers from other nations, and have little control over the setting of fishing quotas. Many fishers, in fact, were "effectively excluded from even considering MSC certification because of the actions of others that [were] beyond their control."¹¹ Similarly, Hoel noted how the MSC criteria favored large-scale fisheries in industrial coastal states because they could afford the certification costs and had the means to participate in the assessment process.¹² In addition to uncertainty about the market benefits accruing from certification, fisheries considering whether to engage in a pre-assessment often perceived the cost of the certification process as a major obstacle.¹³

A recurring criticism of the MSC is the limited access of small-scale fisheries in developing countries to its label.¹⁴ By the end of 2010, the adoption of MSC-labeled products was largely limited to Europe, North America, and Japan, and only a few small fisheries in developing countries had been certified. Indeed, small fisheries that use low impact techniques made up only a tiny fraction of MSC-certified fisheries.¹⁵ These adoption patterns have caused concern that labeling may restrict market access of developing country fisheries. Key barriers cited were lack of knowledge about certification, shortcomings of scientific data about fish stocks and ecosystem impacts, and financial costs of fisheries assessment.¹⁶ As early as 1996, questions had been raised in *Samudra*, the periodical of the International Collective in Support of Fishworkers, about whether or not certification served the interests of fishworkers in developing countries.¹⁷ Yet, in its early years of operation, the MSC paid little attention to their needs. Only more recently has the MSC developed strategies to improve the access of small-scale fisheries to its label, as seen in the launch of its Developing World Fisheries

⁹ MSC 2010.

¹⁰ Kaiser and Edwards-Jones 2006.

¹¹ Kaiser and Edwards-Jones 2006, 394.

¹² Hoel 2006.

¹³ Gulbrandsen 2009.

¹⁴ See, for example, Kaiser and Edwards-Jones 2006; Ponte 2008; and Jacquet et al. 2010.

¹⁵ Jacquet et al. 2010, 29.

¹⁶ Hoel 2006; Gulbrandsen 2009; and Jacquet et al. 2010.

¹⁷ Fowler and Heap 2000, 144.

Program.¹⁸ In 2007, the MSC created a pilot project under this program to enable small-scale and data-deficient fisheries better access to its label. Apart from this project, the MSC focuses on outreach and promotion in developing countries, and has encouraged participation from developing country stakeholders in the program.

Considering that more than half of the seafood consumed in the United States and Europe is sourced from developing countries, the potential for fisheries certification in the developing world is enormous. Notwithstanding this potential, the conclusion must be that patterns of adoption continue to raise questions about the effectiveness of the MSC.

Impact on Producer Practices

The second component of effectiveness – impact on producer practices – captures the causal relationship between participation in a certification scheme and changes in member behavior. Studies of regime effectiveness often seek to determine the *relative improvement* caused by the environmental regime at hand.¹⁹ In the context of certification, this approach to effectiveness could be further specified as the degree to which a certification program modifies harmful producer practices in ways that (are likely to) reverse or ameliorate environmental deterioration and resource depletion. The ability of certification programs to modify producer practices and create better environmental outcomes generally depends on (i) the stringency and comprehensiveness of their standards, (ii) the strictness of the assessment and auditing process, and (iii) the level of compliance with the standards. Ultimately, we are interested in the environmental and social impact of the certification process.

A much-used strategy in impact assessments of certification programs is to investigate the distribution and type of conditions issued by certifiers. Such analyses of MSC certifications have yielded mixed results. A study commissioned by the MSC examined a total of 62 certification conditions in the 10 fisheries that, by late 2005, had been the subject of at least one post-certification audit.²⁰ The study found that although the certified fisheries had all shown some environmental gain resulting from the certification process, there were few major ecological improvements directly related to the certification process.

Looking further into the environmental impact of certification, Ward investigated the distribution of all scores in the first 22 certified fisheries for each MSC principle.²¹ He found that one major MSC certifier systematically awarded higher scores for minimal ecosystem impact than did another, indicating subjectivity in scoring. Critics of the MSC have questioned how vested business interests between certifiers and their clients could result in flexible interpretations of the principles and criteria. Vested business interests in successful certification outcomes is a well-known challenge for credible forestry auditing.²² The competition among certifiers to secure assessment contracts could favor those that are client friendly in their interpretation of the MSC criteria, thus lowering the bar for passing the assessment.

In 2008, the MSC introduced a new fisheries assessment methodology to ensure greater consistency in the scoring of similar fisheries. Despite this, many scientists and conservationists believe that certifiers were overly generous in their recent certification of Pacific hake (2009),

¹⁸ Gulbrandsen 2010.

¹⁹ See, for example, Breitmeier et al. 2006.

²⁰ Agnew et al. 2006.

²¹ Ward 2008.

²² See, for example, Gulbrandsen 2005.

Antarctic toothfish (2010), and Antarctic krill (2010).²³ They also criticized the recertification of the giant US trawl fishery for pollock in the eastern Bering Sea (2010), given its substantial population decline. Responding to the criticism, the MSC said, “[t]here is a proven ecological case for credible third-party certification:” it has increased stock health, reduced by-catches, established no-take zones, lessened the impact on marine habitats, and improved scientific programs.²⁴ Several scientists, experts, and stakeholders also came to the MSC’s defense, arguing that it had established a high bar for seafood certification.²⁵

Still, there is little evidence to suggest that the MSC has contributed significantly to arrest the decline of fish stocks. Ward and Phillips argue that in their present development phase, seafood certification programs such as that of the MSC focus on uptake by resellers and promotion, whereas “the links to creation of environmental improvements are being lost amongst the rush to achieve market penetration and advantage.”²⁶ Other commentators are less critical, suggesting that for consumers and suppliers considering whether to buy MSC-certified fish, “the decision may boil down to whether they want to support a fishery that is incontrovertibly sustainable or just heading in that direction.”²⁷ It is not surprising, perhaps, for the MSC in its first decade to focus on producer adoption and market expansion. In the next decade, however, the MSC must demonstrate the environmental benefits of its certification program. Unless the MSC is able to document major environmental gains from certification, it risks defaulting to a marketing scheme for the seafood industry rather than serving as an institution of environmental change.²⁸ In that event, it could still have a role to play as a program for enhancement of consumer awareness, much like seafood awareness campaigns, but it would not deliver on its promise to generate real benefits for the marine environment.

Unintended Effects of Certification

We should distinguish between the direct effects of the certification program itself and broader consequences of certification. Causal analysis of institutional effectiveness must be alert to unintended positive and negative effects of institutions for environmental governance. Certification programs may, for instance, have consequences their supporters neither anticipated nor intended, such as favoring large-scale rather than small-scale operations owing to the benefits of economies of scale – one of the selection challenges noted in the discussion of adoption patterns.²⁹

In the case of fisheries certification, the MSC has certainly had consequences that were not necessarily intended or anticipated by its supporters. One unintended consequence, discussed above, is the favoring of large fisheries in developed countries at the expense of small fisheries and fishers in developing countries, unable to shoulder the cost of preparing, paying for, and participating in comprehensive certification assessments. The cost of certification ranges from around \$10,000 to \$150,000 per fishery, and fees for annual audits can be up to \$75,000. In addition, because many developing countries lack reliable scientific data on the state of their

²³ Jacquet et al. 2010; and Stokstad 2010. See also Frank Pope, “Concerns Raised Over Marine Stewardship Council’s Fish Label,” *The Times*, 9 November 2009; and David Jolly, “Krill Harvest Certification Upsets Conservationists,” *The New York Times*, 22 June 2010.

²⁴ Rupert Howes, “Marine Stewardship: Catalysing Change,” *Nature* 467, 28 October 2010.

²⁵ *Nature* 467, 30 September 2010, 531.

²⁶ Ward and Phillips 2008, 433.

²⁷ Stokstad 2010, 1597.

²⁸ Ward and Phillips 2008.

²⁹ See also Auld et al. 2008.

fisheries, they are excluded from even being considered for certification. As mentioned, the MSC has recognized this problem and piloted a set of assessment guidelines for small-scale and data-deficient fisheries – the scheme’s keystone initiative for the developing world. Even so, the significant underrepresentation of developing country fisheries in the MSC could challenge the credibility of the scheme, highlighting the need to develop measures that would increase the participation of fisheries in developing countries. Sometimes portrayed as another instance of “green protectionism,” many developing countries see eco-labeling as a *de facto* barrier to trade, and have voiced their concerns in World Trade Organization deliberations such as those of the Committee on Trade and Environment and other international organizations such as the UN Conference on Trade and Development.³⁰

Skewed participation also results in a general lack of certified low-impact fisheries. Although small fisheries using highly selective techniques such as hook-and-line fishing or hand picking have a low impact on habitats and ecosystems, they only make up a fraction of the total MSC-certified catch. Most of the certified fisheries have a medium impact on habitats and ecosystems, and some are high-impact fisheries.³¹ Of course, the potential to modify harmful fishing practices is greater in medium- and high-impact fisheries than it is in low-impact fisheries, but the general lack of certified low-impact fisheries remains a challenge to the MSC’s credibility.

A related unintended consequence of certification arises from the pursuit of large-volume markets and business partnerships with large traders, distributors, and retailers. In an instructive study of the Fair Trade movement, Raynolds and Murray argue that the mainstreaming of Fair Trade is engaging supermarket chains such as Tesco with little visible commitment to social justice principles, and corporations like Nestlé and Chiquita, which are infamous for their exploitative practices in developing countries.³² The risk is that Fair Trade will amount to little more than a “clean washing” tool for these companies. The parallel to fisheries certification is the endorsement of this tool by giant companies such as Unilever, Tesco, Safeway, Sainsbury’s, and Walmart. These powerful retailers can largely dictate product characteristics, volumes and prices, shifting the cost of certification onto their suppliers. Fears about the erosion of the certification movement’s transformative agenda by companies seeking only “green washing” of their brand names seem justified in this context. Rather than representing a costly tool, certification provided giant retailers with a useful instrument for exerting “control at a distance” over suppliers.³³ In this sense, certification programs proved to be a win-win situation for many big box retailers; by demanding certified products they avoided nongovernmental organization targeting, while shifting the costs of quality control and monitoring onto their suppliers.

On the other hand, MSC certification has, in a few cases, empowered smaller producers and producers in poorer countries. Certification of the Baja California lobster fishery, the first fishery in Mexico and Latin America to be approved by the MSC, resulted in the political empowerment of the fisheries cooperatives that were the client for the assessment.³⁴ Enhanced bargaining power in negotiations with both the fishing and environmental authorities in Mexico has translated into the fulfillment of demands for electricity services for the fishing communities, the beginning of a rural road improvements program and other infrastructure services provided

³⁰ Gulbrandsen 2005; and Auld et al. 2008.

³¹ Jacquet et al. 2010.

³² Raynolds and Murray 2007.

³³ Ponte and Gibbon 2005, 22.

³⁴ Agnew et al. 2006.

by the government.³⁵ In sum, certification can have both positive and negative unintended consequences, demonstrating that effectiveness studies should evaluate not only the direct effects of certification but also broader environmental, socioeconomic, and political effects.

Intersection with Government Regulations

Given the exclusive authority of governments in fisheries governance and allocation decisions, the effectiveness of fisheries certification depends strongly on intergovernmental and governmental fisheries regulations. Unlike many standardization bodies, however, the MSC allocates no preferred position to governments, which they treat like any other stakeholder such as conservation organizations, fishing companies, industry associations, and seafood buyers. Accordingly, many governments were deeply skeptical of the MSC at its inception, questioning the right of nonstate certification programs to play a role in fisheries governance. Following several years of deliberations over how the Food and Agriculture Organization (FAO) should respond to fisheries certification initiatives, the FAO's Committee of Fisheries called in 2003 for the development of guidelines for eco-labeling of fish and fisheries products from wild-capture fisheries. A set of such guidelines was subsequently drafted during a series of FAO expert and technical consultations. Issued by the FAO in 2005, these nonbinding guidelines emphasized the need to include in labeling programs objective third-party fisheries assessments using scientific evidence; transparent processes with extensive stakeholder consultation and opportunities for complaints and rules for adjudication; and standards based on the sustainability of target species, ecosystems and management practices.³⁶ Although the guidelines fell short of prescribing mandatory requirements for the use of ecolabels, they represented a step toward increased government influence over nonstate certification schemes.³⁷

The MSC responded swiftly by welcoming the issuance of FAO guidelines, which it described as "a significant endorsement of eco-labeling as a tool to achieve the sustainable management of fisheries."³⁸ In order to comply fully with the guidelines, the program had to separate the standard setting and accreditation functions. The MSC thus outsourced accreditation decisions to Accreditation Services International – an independent organization that also accredits certifiers for the FSC. Similar to the FSC, the MSC's approach to accreditation has therefore evolved from an in-house process to one controlled by a separate organization. It was further obliged to make its procedure for handling objections to fisheries assessments independent of the certification program. Both changes, according to the MSC, had been implemented by September 2006.³⁹

Rather than presenting a challenge to the MSC's authority, the FAO guidelines seem to have consolidated the MSC's position as the leading global certification program for wild-capture fisheries, making it more difficult for potential competitors to create a scheme with equally strong requirements.⁴⁰ Importantly, the three main principles of fisheries assessment identified by the the FAO correspond to the MSC principles – the health of the fish stocks, the impact of the fishery on the ecosystem, and the performance of the fishery management system. Most governments with a significant stake in seafood exports have become increasingly supportive

³⁵ Phillips et al. 2008.

³⁶ FAO 2005.

³⁷ Gulbrandsen 2009.

³⁸ MSC 2005.

³⁹ MSC 2006.

⁴⁰ Gulbrandsen 2009.

of the MSC, encouraging and enabling fisheries certification. Government management authorities have in many cases been the clients for MSC certification or covered auditing costs for private companies. A recent example is the Canadian government's financial support for the certification of the Atlantic lobster industry in a bid to counter the damaging effects of the 2009 global economic crisis on the lobster fishing communities on the East Coast. Similarly, the Norwegian government, which used to be very dubious about the MSC, has recently encouraged, endorsed and even been the client for the certification of seafood exports. For instance, the Norwegian Seafood Export Council, a limited company established and fully owned by the Ministry of Fisheries and Coastal Affairs, was the client for the 2010 certification of Norway's offshore Northeast Arctic cod and haddock fisheries. Much as a result of the Norwegian government's revised attitude to the MSC, the Norwegian seafood industry has in the course of just a few years leap-frogged from a no certification state to one of the biggest players in the MSC in terms of certified volumes.

Demonstrating to government regulators that a fishery is well managed may ensure favorable treatment when catch quotas or other resources are allocated. In a study of the South African hake fishery, for example, Ponte found that MSC certification was used to prevent a redistribution of quotas away from the large (white-owned) deep-sea trawling sector to the smaller (black-owned) long lining sector.⁴¹ Certification has also been used strategically by producers to prevent the introduction of stricter government regulations. Sutton, for instance, describes how fishery managers in Western Australia's rock lobster fishery used the achievement of MSC certification to prevent the introduction of marine reserves in Western Australian waters, rejecting the need for fishing sanctuaries on the grounds that the fishery is certified.⁴²

To summarize, the effectiveness of the MSC in arresting the decline of fish stocks and enhancing marine conservation depends critically on its interaction with government regulations. Fish resources are in most cases common-pool resources, requiring government intervention for their conservation and management. Because uncertain or disputed property rights over fisheries are a major barrier to a wider uptake of the MSC, governments must establish and protect property rights to enable certification of open-access marine fisheries.⁴³ Governments must also provide the scientific data on the state of fish stocks and fisheries that certifiers need for the assessment process. In essence, government intervention is necessary to enable certification of fisheries that currently fall short of the MSC criteria. One option for fisheries stakeholders is to work with governments to change regulatory frameworks in ways that would allow certification of fisheries that meet most of the MSC criteria, but are effectively excluded from access to the label because they share the fish stocks with other fisheries that do not fish sustainably. Similarly, if governments believe that certification is vital for the economic viability and market access of their fishing industry, they can take the initiative to change management regimes to allow for the certification of fisheries.⁴⁴ A critical area of study is therefore the interaction between private and public authority in the governance of transboundary problems such as overfishing and marine ecosystem degradation. Although scholars have begun to examine the intersection of certification and government regulations,⁴⁵ we still know too little about the dynamics between nonstate certification programs and fisheries management regimes.

⁴¹ Ponte 2008.

⁴² Sutton 2003.

⁴³ Kaiser and Edwards-Jones 2006.

⁴⁴ Hoel 2006, 349.

⁴⁵ See, for example, Gale and Haward 2011.

Conclusion

The increasing number of certified fisheries and total catch volumes illustrate the dramatic growth of the MSC during its first decade of operations. With thousands of different MSC-certified products sold in more than 60 countries around the world, the MSC has become a major player in the seafood market. Fish products carrying its blue check-mark label can be found in the stores of big box retailers such as Walmart, Whole Foods Market, Sainsbury's, Safeway, and Tesco. Despite the rapid growth of the program, however, patterns of adoption continue to raise questions about effectiveness. Large, capital-intensive fisheries in developed countries make up the overwhelming share of the MSC's certified catch. Small fisheries using low-impact techniques, such as hook-and-line fishing, remain a minute part of the certified catch. This chapter identified the favoring of large-scale over small-scale operations, owing to the benefits of economies of scale, and of developed over developing countries, owing to differences in baseline data and regulatory frameworks, as negative unintended consequence of fisheries certification.

Some observers see a promise in the MSC's certification approach in that it should help to generate more sustainable consumption patterns and more sustainable fisheries management. Others are skeptical about its environmental impact; there is little evidence, they argue, to suggest it has arrested overfishing or delivered major ecological benefits. Although a number of process improvements in MSC-certified fisheries indicate the program's potential to bring about environmental improvements, this chapter has demonstrated that certification alone is unlikely to be a solution to declining fish stocks. I discussed why government efforts to establish property rights and address the imbalance between fish resources and harvesting capacity must be part of the solution. The regional and global scale of overfishing and stock depletion is a significant challenge to certification as a means of addressing these problems which are rarely contained within a single fishery. This is why studying how fisheries certification intersect with government regulations is critical. Although fisheries management regimes may constrain the MSC in the short term, the direction of influence could flip in the longer term. Indeed, the indirect effects of certification on government regulations, over time, may be just as important as the direct effects on each fishery. Improving fisheries management regimes will be necessary to enable certification of a number of fisheries that currently fall short of the MSC criteria because they share the fish stocks with fisheries that do not fish responsibly. With a considerable market pull for certification, governments and the fishing industry alike may find it in their best interest to improve management regimes in ways that would allow certification of their fisheries. The combined effect of certification and changes in fisheries management regimes could make a strong contribution to resolving the dire problems of overfishing and depleting fish stocks.

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27 Evaluating World Bank environmental performance

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International organizations (IOs) face a quandary. They are expected to play a more significant role in global governance by some, while others expect the opposite. Amidst the tug-of-war over expectations, they are also struggling to respond to relentless criticism for poor to mixed performance. Questions of how much authority can effectively be delegated to IOs while they are being asked to juggle more complex issues have prompted heated policy debates about the role of IOs today and their place in the architecture of global governance. This challenge is most visible in the case of multilateral development banks (MDBs), where a variety of institutional reforms have failed to placate critics. An important case is the attempt by MDBs over the past two decades to address environmental issues in their work. Shareholder countries have asked MDBs to provide leadership in global and regional environmental governance, while critics contend that these institutions do a poor job following their own environmental policies and contribute to environmental degradation in a number of recipient countries.

The case of MDB environmental performance is also important for three additional reasons. First, criticism of the World Bank's environmental behavior in the early 1980s prompted the first large campaign by nongovernmental organizations (NGOs) for MDB reforms, which has inspired more recent campaigns against the international financial institutions (IFIs).² Second, and related, MDB attempts to improve their environmental performance since the late 1980s are more established than policies in other newer issue areas, such as gender and "good" governance. Third, MDBs have placed considerable emphasis on "mainstreaming" the environment into all of their activities, instead of treating it as a separate sector. Therefore, a more precise explanation of the factors that influence an MDB's ability to address environmental issues helps us to better understand the challenges it faces carrying out activities in other new areas. It also offers insight into the choices other IOs face when juggling environmental goals with a growing array of development goals.

Within the field of international relations (IR), theory seeking to account for the gaps between the mandates and performance of IOs is underdeveloped, since the field's focus has been dominated by broader debates about why states create IOs, whether institutions matter, and whether they have autonomy. This chapter seeks to contribute to a growing body of work interested in providing a more precise explanation of institutional performance, behavior, and effects.

One promising strand of theory can be found in the application of principal-agent (P-A) models toward understanding IO performance. These models are premised on the assumption that performance problems naturally arise when one actor (the principal) delegates to another actor (the agent) the authority to act in the interest of the former. These models seek to explain

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² By IFIs, I refer to the MDBs and the International Monetary Fund.

why and how the divergence of interests between the two parties may result in the agent's actions differing from the principal's expectations, and how agents may be better controlled. In other words, P–A models recognize the existence of gaps between institutional goals and actions that are caused by these “side-effects” of delegation that generate agency losses and other costs to the principal. These models are used to suggest measures the principal may employ to reduce opportunistic agent behavior. Such measures typically include a variety of screening, contracting, and oversight mechanisms.³

The traditional model's focus on one agent or set of agents engaged in opportunistic behavior with one principal or set of principals ignores critical factors that help to explain some major sources of gaps between the mandates and performance of IOs. I argue that the P–A model may usefully be calibrated to more precisely explain IO performance pathologies by better recognizing problems of *antinomic delegation* and the dual role of the MDB as principal and agent. Antinomic delegation is defined as delegation consisting of conflicting or complex tasks that are difficult to institutionalize and implement. Where antinomic delegation is present, performance problems may not solely reflect agency shirking, but rather be traced to the more intricate challenge agents face trying to implement goals that are difficult to specify and/or juggle. In the case of MDBs, such problems arise from their congenital condition of being both financial institution and development agency, and their efforts to balance environmental issues with other goals such as economic development and poverty reduction. The broader problem of mission creep easily contributes to the specific problems of antinomic delegation.

Analysis of the dual role of the MDB as principal *and* agent at different stages of the policy process reveals additional opportunities for gaps between mandates and on-the-ground behavior. Most of the recent IR literature applying P–A models to IOs addresses only one of these two sets of P–A relationships – usually from elected political officials to the bureaucracy agent. This means that the chain of delegation, and hence analysis of performance, stops with the organization, and does not address implementation issues. While IOs are characterized by a set of collective principals that may create opportunities for institutional autonomy, the recognition that IOs themselves may be usefully analyzed as *principals* delegating to recipient country *agents* reveals additional opportunities for agency losses.

I illustrate these modifications to the traditional P–A model by analyzing the World Bank's efforts to improve its environmental performance. The World Bank is the world's preeminent development bank, one of the world's most powerful IOs, and an institution under sustained attack from a variety of sources for the gulf between its publicly stated goals and its performance in a range of issues.⁴ In the area of environment, the Bank has recognized its own shortcomings. As the head of the Bank's Operations Evaluations Department (OED) noted in an evaluation of the Bank's environmental performance:

The momentum of the early 1990s dissipated in the face of constraints in the operating environment. Environmental sustainability was not integrated into the Bank's core objectives and country strategies, and linkages between macroeconomic policy, poverty alleviation and environmental sustainability were not explicitly forged.⁵

³ Kiewiet and McCubbins 1991, 24–34.

⁴ Fox and Brown 1998; Report of the International Financial Institution Advisory Commission 2000 (hereafter “Meltzer Commission”); Einhorn 2001; Pincus and Winters 2002; Mallaby 2004; and Weaver 2008.

⁵ World Bank 2002a, vii.

The report concluded, “The modest extent of mainstreaming the environment into the Bank’s overall program is disturbing.”⁶

I show how agency theory offers a potentially powerful tool for identifying key sources of gaps between IO mandates and performance when it explicitly recognizes and analyzes both the problems inherent to the delegation side of the P–A relationship and problems revealed by studying an IO as both an agent and a principal. Certainly no one theory can explain all performance problems facing IOs, since different political, economic, technical and organizational factors may influence an institution’s actions at different stages of the policy process extending from the formulation of a new institutional policy mandate through its implementation. Rather, agency theory illuminates specific performance problems in the design and implementation of Bank policies and projects that may be traced to delegation and incentive choices and mechanisms. Better pinpointing where and why these problems exist more clearly reveals why environmental reform at the Bank has been an uneven process, with forward steps often followed by backward or sideways steps.

The chapter proceeds by examining the development of the P–A literature and its application to the study of IOs, highlighting the model’s utility and its blind spots. I then advance suggestions for increasing the model’s explanatory power by applying my arguments to the case of the World Bank’s environmental reforms. The chapter concludes by discussing the theoretical and policy implications of these modifications.

P–A Models and Institutional Performance

Agency models and theory have their roots in studies of economic contracting and corporate governance, and have since expanded into a broad literature with strands in institutional and development economics, organizational theory, public administration and political science. They migrated into political science via studies of the behavior of the US Congress and other public bureaucracies, and more recently have been applied by IR scholars pursuing rationalist research agendas in the study of IOs in general, and development aid organizations in particular. Within the political science literature, the P–A relationship is generally viewed as a political principal delegating some degree of policy-making authority to an implementing bureaucratic agent. The model has attracted interest as a useful way to move beyond blunt debates over whether institutions matter and have autonomy to more nuanced explorations of the sources of institutional effectiveness and dysfunctional behavior.⁷ It is based on the assumption that performance problems are a likely result when one actor delegates authority to another because the two sides have divergent interests.

The ideas underlying the model are certainly not new. Adam Smith wrote in the *Wealth of Nations* about the divergent interests between the directors and proprietors of joint stock companies:

The directors of such companies ... being the managers rather of other people’s money than of their own, it cannot well be expected that they should watch over it with the same anxious vigilance with which the partners in a private (company) frequently watch over their own ... Negligence and profusion, therefore, must always prevail, more or less, in the management of the affairs of such a company.⁸

⁶ World Bank 2002a, 19.

⁷ For alternative approaches to these issues in the field of IO, see Haas 1990; Bernauer 1995; Keohane and Levy 1996; and Victor et al. 1998; and Barnett and Finnemore 1999, 2004.

⁸ Smith 1776, Book 5, Chapter 1, Part 3, Article 1.

The development of a more formal agency theory has its roots in the 1970s in economic studies seeking to explain and improve the performance of firms in ways that challenged neoclassical conceptions of the firm as a simple production function seeking to maximize profits. Classic explanations of agency theory from the 1970s can be found in the work of economists who recognized the divergence of interests that may occur between sets of principals and agents found in the modern firm. These studies offered ideas on how to structure monitoring and contractual mechanisms to better align the agent's incentives to the principal's.⁹ Much of the literature assumes that the central problem to be solved is how to induce the agent to maximize the principal's welfare, and it also recognizes that there are costs to the various control mechanisms.

Scholars applying the model to political institutions acknowledge the obvious differences between the behavior of firms and public organizations. These include the observations that government agencies have numerous mandates that are often difficult to measure, that they are often agents to multiple, competing principals, and that politicians do not always delegate based on commonly assumed notions of efficiency.¹⁰ Nonetheless, P–A models direct attention to the “subtle web of incentives and relationships that condition political control,” and shed light on the efficacy of institutional arrangements and oversight options that political principals use to control bureaucratic agents.¹¹ Common control measures include screening and selection mechanisms to avoid selecting an inappropriate (for example, incompetent or corrupt) agent; mechanisms to control agency discretion; financial incentives linked to performance; and different forms of inspection linked to positive benefits or negative sanctions.¹²

While much of this work on political institutions comes out of the field of American politics, new strands have appeared in other fields. Europeanists, for example, have applied insights from P–A models to examine when and how European Union (EU) institutions exhibit autonomy from member governments, why states delegate to supranational institutions, and how EU institutions impact P–A relationships at the member state level.¹³

Another strand of scholarship exists within the fields of IR and development economics, to explain why foreign aid institutions often fail to achieve the desired results. Most of this work looks at either the aid organization as principal and the recipient country as agent, or at the aid organization as the agent of member state principals (multiple principals). To date, there is very little work that recognizes an IO may be *both* an agent *and* a principal, depending on which stage of the policy process is being analyzed.¹⁴

The work viewing the aid organization as a principal focuses on why aid conditionality is so often ineffective. Conditionality, by definition, is a P–A issue, because it is all about donor–principals seeking to induce policy change in recipient–agent countries in return for aid. As such, development economists recognize that IFI principals lending to recipient country agents have much in common with the traditional P–A relationship between private lenders and borrowers. Asymmetric information endemic to both sets of relationships gives rise to problems such as moral hazard, where the borrower may decide it has an interest in taking more risks that may increase the possibility of default.¹⁵ Other work along these lines has argued that the

⁹ Alchian and Demsetz 1972; and Jensen and Meckling 1976.

¹⁰ Moe 1984, 1990; and Tirole 1994.

¹¹ Moe 1984, 771.

¹² McCubbins et al. 1987, 1989; Kiewiet and McCubbins 1991; and Bawn 1995.

¹³ Pollack 2003; Talberg 2002; and Bergman 2000.

¹⁴ Notable exceptions include Martens et al. 2002; and Ostrom et al. 2002.

¹⁵ Killick 1997; Dixit 2000; and Khan and Sharma 2001.

ability of the donor institution to use conditionality to exert leverage over the recipient country depends on factors such as the degree of asymmetry in their bargaining power. Weak recipients dependent on aid are more likely to accept conditionality offered by strong donors, while strong recipients with the ability to tap into alternative sources of financing with fewer strings attached are better able to shape aid packages.¹⁶ Donor institutions also delegate implementation responsibility to contractors, and there are many examples of performance problems arising as the latter pursue their own interests.¹⁷

Within the field of IR, most of the work applying P–A models to international organizations has focused on the politics of member state delegation to IO agents, rather than IO performance.¹⁸ Scholars are beginning to move beyond that by investigating how P–A models may illuminate issues of institutional performance and/or behavior.¹⁹

One example from the literature using a P–A model to examine specifically the World Bank and to evaluate its environmental behavior is an article by Daniel Nielson and Michael Tierney that argues Bank shareholder principals were successfully able to change the behavior of Bank officials.²⁰ It is worth discussing the Nielson and Tierney argument in some detail, because it uses the same theory and case study presented here to arrive at quite different conclusions. The authors use a P–A model to argue that in 1994 the World Bank suddenly undertook sweeping environmental reforms that significantly altered its environmental lending portfolio and behavior. The driving force, they claim, was the Bank's shareholder principals, led by the US, enacting a variety of reforms, such as new reporting requirements and an increase in environmental staff, which resulted in reining in the Bank-as-agent. The evidence offered includes a statistical analysis of Bank-approved loans between 1980 and 2000. The authors argue that there is a statistically significant increase in both the percentage of environmental lending by the Bank and in the number of stand-alone-environmental projects after 1993. They argue that the latter, for example, increased by almost 15 percent in the 1994–2000 period, compared with 7.3 percent for 1987–93.²¹

I disagree with their conclusions, which in my view conflate *behavior* with *intention* and are based on a faulty coding of Bank projects that does not accurately measure environmental lending or behavior.²² I shall argue below that 1994 was not a benchmark year for behavioral change at the Bank, and that existing evidence paints a picture not of significant change as the authors assert, but rather, a slower, more uneven process. The authors measure “behavior” by analyzing board-approved projects without examining what happened *after* approval. That approach, I believe, cannot begin to determine whether Bank officials have been reined in or not because it does not examine whether and why projects are cancelled, partially implemented, poorly implemented, or implemented in a way that promotes environmental degradation.

Also problematic is the fact that the authors code Bank projects as “primarily environmental or not,” without clearly defining the terms, as they seek to measure increases in lending for projects with primary environmental goals, and a decline in lending for projects that are environmentally harmful. Indeed, the authors consider the projects that may *harm* the environment

¹⁶ Gutner 2002; and Ostrom et al. 2002.

¹⁷ Cooley and Ron 2002.

¹⁸ For example, Gould 2003; and Hawkins et al. 2006.

¹⁹ Elsig 2010; Gutner and Thompson 2010; and Pollack and Hafner-Burton 2010.

²⁰ Nielson and Tierney 2003.

²¹ Nielson and Tierney 2003, 269, 270.

²² See Gutner 2005 for a more detailed critique of Nielson and Tierney 2003. See their response to this critique in Tierney and Nielson 2005.

as including projects in the energy, transportation and urban development sectors, but in fact, many of these projects have significant environmental benefits, for example, an urban development project for sewage treatment or an energy project emphasizing supply efficiency. Conversely, some projects that appear on paper to be environmentally beneficial have been accused by NGOs and others as causing environmental degradation, such as some forestry projects.²³ If projects are categorized by sector and without attention to design or implementation, we simply cannot tell if changes in Bank policies or staffing influenced how the projects address environmental issues.

Finally, the increase in lending during 1994–2000 that the authors highlight is significantly boosted by their inclusion of Bank-managed projects of the Global Environment Facility (GEF). Yet, the GEF is a separate grant-based mechanism. While the World Bank is the main implementing agency of the GEF, and it often “blends” GEF funds into Bank projects, such projects follow Bank policies and procedures and do not reflect greater monitoring and oversight mechanisms by World Bank principals.²⁴ Ultimately, there is no way to know from the evidence offered by Nielson and Tierney whether significant environmental reform at the Bank has occurred. Their findings of a “punctuated and significant” increase in environmental lending also differs sharply from the Bank’s own assessment that environmental components and objectives of its approved loans have fallen from 14 percent of its 1993 portfolio to a historical low of 5 percent in fiscal 2002.²⁵

The following section presents an alternative picture to that of Nielson and Tierney, showing how agency theory can help to explain why performance has been uneven rather than unambiguously positive. I first offer evidence that the process of environmental reform at the Bank can be characterized as encompassing forward steps accompanied or followed by backward or sideways steps. I then turn to a discussion of how agency theory emphasizing problems of complex delegation and the dual role of the Bank as principal and agent offers a powerful analytical tool to explain the Bank’s uneven environmental performance.

“Greening” the World Bank

The birth of an environmental initiative at the Bank occurred in 1970, when president Robert McNamara set up a new unit, the Office of Environmental and Health Affairs, to help developing countries “avoid or mitigate some of the damage economic development can do to the environment, without at the same time slowing down the pace of economic progress.”²⁶ The office, soon renamed the Office of Environmental Affairs, was powerless, lacking the staff, resources, and the political will of shareholders to strengthen the Bank’s environmental scrutiny. The definition of what exactly an “environmental issue” was remained poorly developed, and the office tended to emphasize public health issues. As Wade noted, “what the Bank did under the label ‘environment’ included residual matters such as relocating a power line so that it would not spoil the view from a game lodge ...”²⁷

In 1987 the Bank embarked on a process of significant environmental reform in response to strong pressure from the US, the Bank’s single most powerful shareholder, backed by other

²³ Nielson and Tierney (2003) implicitly recognize that implementation must be addressed in coding projects because they exclude forestry projects from their dataset. For an example of criticism of the Bank’s behavior in the forest sector, see World Rainforest Movement 2002.

²⁴ See Young 2002 for a critique of the GEF.

²⁵ Lovei 2003.

²⁶ McNamara 1981. On the factors shaping this decision, see Le Prestre 1989; and Wade 1997.

²⁷ Wade 1997, 621.

major European shareholders. These efforts were pushed by a major environmental NGO campaign to reform the Bank, using evidence that some Bank projects were causing enormous environmental degradation.²⁸ One example was the huge Polonoereste projects in Brazil, for which the Bank provided over \$450 million in loans in the early 1980s to promote agricultural colonization and road-building in the state of Rondônia. NGOs and others argued that the project encouraged a massive migration of colonists that overwhelmed support efforts, resulted in slash-and-burn agriculture, and ultimately was responsible for enormous deforestation, among myriad other problems.

The leading role of the US in forcing the Bank to reform its environmental policies and actions is widely recognized and has been described in detail elsewhere.²⁹ From 1983 to 1987, over 20 hearings on MDB performance were held before six US congressional subcommittees. NGOs built support within the US Congress at a time when the US was negotiating over its contribution to a round of capital replenishment at the Bank. Capital replenishment has become a key way for shareholders to lobby for changes within MDBs.³⁰ Given the degree of frustration on the part of the US Congress with the Bank's environmental behavior, it was clear that an increase in the US contribution to the International Bank for Reconstruction and Development (IBRD) or the International Development Association (IDA) would be difficult in the absence of environmental reform. In late 1984 the House Subcommittee on International Development Institutions and Finance issued a set of recommendations to the US Treasury and US executive directors at the World Bank and other MDBs to increase environmental staffing, to consult with NGOs and environmental ministries in project preparation, to create a new staff position at Treasury to help monitor MDB environmental behavior, and to fund more environmentally oriented projects.³¹ The NGOs found a powerful ally in the US Treasury, which oversees US participation in the IFIs, and beginning in 1986, joined in to pressure the Bank to address the environmentalists' concerns. The Treasury was concerned about avoiding any threats to the IBRD's capital increase since tackling the Latin American debt crisis required more IBRD money.³² Support from other major shareholders, such as Germany, also increased pressure on the Bank.

Barber Conable, who became president of the Bank in July 1986, had been a Republican congressman for over 20 years, and understood well the obstacles faced in Congress to increased US funding. The result was his admission in 1987 that the Bank was "part of the (environmental) problem," and the announcement of a central environmental department to "take the lead in development strategies to integrate environmental considerations into our overall lending and policy activities" as well as regional environmental offices to act as "environmental watchdogs" over Bank projects.³³

The 1987 reforms are an example of major forward steps taken by the Bank to better address environmental issues. Other such steps since then have included the development of safeguard policies such as environmental assessment procedures in 1989 (revised in 1991 and 1999), to prevent or mitigate a project's possible adverse environmental impacts; specific efforts to

²⁸ Rich 1994; and Wade 1997.

²⁹ For example, Rich 1994; and Wade 1997. In addition to being the Bank's largest shareholder, with 16.4 percent of the votes, it is one of only eight countries with its own executive director on the Bank's board. The Bank is also based in Washington, DC, and its president is an American citizen.

³⁰ The Bank's International Development Association, which offers no-interest loans to the Bank's poorest members, is replenished on a three-year cycle, while the IBRD's capital replenishments occur less often.

³¹ Schwartzman 1984.

³² Wade 1997, 667–8.

³³ Conable 1991, 22.

promote loans with primary or significant environmental components; and a variety of projects and programs to help member countries develop environmental institutions, strategies and policies. The latter efforts include the National Environmental Action Plans (NEAPs) that the Bank required for some years for IDA borrowers and suggested for IBRD borrowers. NEAPs described and analyzed a country's major environmental problems and offered policy solutions and other actions for addressing them. At the global and regional levels, as noted above, the Bank is an implementing agency for the GEF (established in 1991), as well as the Montreal Protocol's Multilateral Fund (established in 1990). It has also played a leadership role in international programs for the Mediterranean, Baltic, Caspian, Red, Black and Aral seas, and a joint initiative with the International Union for the Conservation of Nature (IUCN) that created the World Commission on Dams. Since 1999 it has worked to help governments and companies invest in projects that reduce greenhouse gas emissions in ways that fit the Kyoto Protocol framework. Its other actions on climate change include dramatically increased lending for low carbon investments; managing a Clean Technology Fund with over \$4 billion for cofinancing projects around the world; and running a Carbon Partnership Facility that to date has raised over \$150 million. It has also sought to incorporate environmental issues into its country policy work and assistance strategies.³⁴

Other measures to increase accountability and transparency include the creation of an Inspection Panel in 1993 to investigate claims by private citizens that Bank projects have not followed proper policies or procedures; and a public information policy adopted in 1994 and revised in 2002 aimed at increasing transparency by making available documents that were once confidential. Additional oversight mechanisms include the internal Quality Assurance Group (1996) to assess the quality of projects, supervision and analytical work, and a Quality Assurance and Compliance Unit (2000) specifically to oversee Bank staff compliance with safeguard policies.

Given that many of these reforms can be directly traced to pressure for change by the US and other leading shareholders, often during times of capital replenishments, they do reflect attempts by the shareholder state principals to improve the performance of the Bank-as-agent. Yet, few of these major measures have escaped criticism. For example, the 1987 reorganization did not stop the Bank from getting involved in projects seen as highly controversial from an environmental perspective.³⁵ Key policies for the environment have also faced internal and external criticism for having limited impact on project design and hence project outcomes. Bank safeguard policies in general have faced "gaps, inconsistencies, and ambiguities that lead to confusion among operational staff, clients, and external shareholders," according to an internal Bank report.³⁶ Another study pointed out that "very few EAs [environmental assessments] influence project design."³⁷ Other Bank studies have criticized the Country Assistance Strategy (CAS) for isolating environmental issues from other issues discussed in the strategy.³⁸ According to the World Bank itself, of the CASs reviewed over the 1992–99 period, only half "adequately" addressed environmental issues.³⁹

³⁴ World Bank 2010.

³⁵ Projects that were controversial in the 1990s and early 2000s included the Narmada River Sardar Sarovar dam construction projects in India; the Chad–Cameroon oil pipeline project; the canceled Arun 3 dam project in Nepal; and the canceled China Western Poverty Reduction project.

³⁶ World Bank 2000b, 17.

³⁷ World Bank 1996, 24.

³⁸ World Bank 2000c.

³⁹ World Bank 2002a, xiv.

Even the Inspection Panel, while a commendable step in improving Bank accountability, is not uniformly viewed as a successful oversight tool. Treacle et al., for example, have shown in detail the often limited impact the Panel has on Bank projects.⁴⁰ Although it may be the case that over time these various reforms will have a clear impact on lending behavior, new Bank policies and procedures themselves cannot be considered proxies for behavioral change without analysis of their implementation.

The positive reforms at the Bank have also been accompanied by backward or sideways steps. One of the most important examples of a backward step is the 1997 organizational restructuring under Bank president James Wolfensohn, which shifted power in the Bank to country directors who control country budgets. While the move was applauded as a means to increase the Bank's accountability to its client countries, many recipient countries and country directors see environmental issues as relatively lower priorities than they may be for the Bank's major shareholders. The result has been that country directors call less often on environmental staff to design projects featuring environmental goals unless such projects also fulfill other priority needs.⁴¹

Another important backward step has been the Bank's continuing support for coal-fired power plants, which to some degree undermines its activities to address climate change.⁴² In fact, one environmental group argued that the Bank has been the second largest source for publicly financed coal-fired power plants in the past 14 years.⁴³

Today the Bank's environmental performance remains a mixed bag. The most recent Independent Evaluation Group report concluded that the Bank faces external and internal constraints to its support for environmental sustainability. The external constraints include the fact that borrower governments are insufficiently committed to promoting environmental goals, and often lack sufficient capacity to address these issues. Within the Bank, the report concluded that there is still "insufficient attention to longer term sustainable development" as well as inadequate internal systems in place throughout the Bank group to properly monitor environmental outcomes.⁴⁴

Given the widespread perception that the Bank has not successfully "mainstreamed" environmental issues into its activities, the question remains: what factors contribute to gaps between intention and performance? Such gaps do not surprise organizational theorists, sociological institutionalists, and constructivists who assume the existence of multiple sources of pressures or dysfunctional bureaucracies that hinder intended performance outcomes.⁴⁵ Yet while P-A models also have yielded insights into the gaps between institutional objectives and performance, they have yet to explain challenges to delegation within IOs that are not directly caused by agent opportunism and cannot be fully understood by viewing the organization solely as principal or agent. The following section analyzes the ways that antinomic delegation problems and the long delegation chain illuminate ongoing criticism of the Bank's environmental behavior.

⁴⁰ Treacle et al. 2003.

⁴¹ World Bank 2002a, viii, xi.

⁴² See, for example, "World Bank Climate Funds: 'A Huge Leap Backwards,'" Bretton Woods Project, Update 60 (2008), at <http://www.brettonwoodsproject.org/art-560997>, accessed 3 September 2009.

⁴³ Rich 2009. In April 2011 the Bank announced it planned to limit lending for coal-fired power states, which reflected pressure from NGOs on this issue. But because it would continue to fund power plants in the poorest countries, some NGOs were not satisfied by this proposal. See Harvey 2011.

⁴⁴ World Bank 2008.

⁴⁵ Cohen et al. 1972; March 1978; Haas 1990; and Barnett and Finnemore 2004.

Antinomic Delegation

P–A models tend to find the obstacles to performance in the opportunistic behavior of agents, and examine various techniques that may be used to give the agent greater incentive to pursue the principal's agenda. Yet what if the problem comes from the delegation side, in the sense that the principals are delegating tasks that do not easily conform to the institution's mission and internal incentive systems, or are simply very complex and difficult to carry out? Agency theory recognizes that bureaucracies have multiple or collective principals who push for a variety of sometimes conflicting goals. There is debate about whether the existence of multiple principals may create more efficient outcomes by creating systems of checks and balances;⁴⁶ or whether the potential problems facing multiple principals make delegation less attractive.⁴⁷ However, there are few attempts that analyze the impact these challenges have on the performance of international organizations. This chapter does not explicitly test hypotheses on *why* the World Bank juggles a multitude of mandates, but, rather, focuses on the Bank's mixed efforts to respond to them.

There are two interrelated ways in which delegation is complex at the World Bank. One reflects a more macro-level problem of mission creep, the mushrooming of new institutional goals without a corresponding reduction in old goals. The existence of multiple goals does not automatically mean that principals cannot construct strong incentive schemes to address various performance components.⁴⁸ Yet multiple goals do bring into sharp focus individual components that are difficult to weigh. The second area of complex delegation, then, is where different goals directly conflict with one another, making implementation inherently difficult. This is the problem of antinomic delegation. In the case of the World Bank, the latter includes the challenge of being a financial institution and development agency; and the challenge of integrating environmental considerations into its economic development and poverty alleviation work.

Mission Creep

Mission creep is pervasive across IOs, if one thinks of NATO's expansion in the wake of the Soviet Union's demise; the United Nations' involvement in intra-state wars; and the World Trade Organization's enhanced powers to settle trade disputes. In the case of the World Bank, Jessica Einhorn, a former managing director, argues that the Bank's "mission has become so complex that it strains credulity to portray the Bank as a manageable organization."⁴⁹ Its lending themes include public sector governance, rule of law, social development, and human development, among other areas. It has strategies to assist countries in changing gender patterns, empowering society, and protecting the environment. It is also helping to implement all the goals of the 2000 UN Millennium Declaration, which contains ambitious targets for reducing infant, child and maternity mortality, and achieving universal primary and secondary education, among other issues.

There is no shortage of hypotheses seeking to explain World Bank mission creep, mainly from the policy world, but few if any explanations have been systematically tested. They include blaming the Bank's president for poor leadership, blaming the board of directors for lacking consensus about the Bank's mission and for giving management sometimes conflicting

⁴⁶ Tirole 1994.

⁴⁷ Pollack 2003.

⁴⁸ Tirole 1994.

⁴⁹ Einhorn 2001, 22.

guidance, and blaming pressure from civil society in pushing member states to add new mandates.⁵⁰ In P–A language, all of these explanations eventually point to shortfalls on the principal side of the equation, where the principals are the member state shareholders of the Bank. Something is lacking in Bank leadership that has resulted in the absence of a clear, focused mission that impacts the incentives facing Bank staff and management to do their jobs.⁵¹

Even if we recognize that these problems contribute to agency slack and that more precise monitoring and oversight mechanisms may tweak agent behavior, it is still important to get at the root of the problem and acknowledge that the principal may make poor decisions, may make sensible decisions that are difficult to implement, may not fully understand the implications of some of its actions, and may not be able to provide helpful guidance on how the agent should implement these actions. It is also possible that principals may have political or other reasons for producing policies they know cannot be easily carried out. While the problem of mission creep illustrates a macro picture of institutional struggle, the next subsection shows how a P–A framework helps to better explain the problems the Bank faces in juggling its goals as financial institution and development agency, and addressing environmental issues within its broader mandates.

Bank versus Development Agency

Multilateral development banks face the everyday challenge of simultaneously functioning as part financial institution and part development institution. They are financial institutions in the sense that their primary function is to lend money to creditworthy governments or private sector actors for projects that meet the banks' criteria on financial, economic, technical and legal viability. Of course, MDBs are also distinctly different from private banks. They are supposed to lend money that enhances but does not crowd out private sector lending, although in practice it is often difficult to determine whether or not a project would have existed without MDB involvement. MDB loans also have longer maturities, grace periods, and lower interest rates than commercial loans, and MDB loans to governments usually require sovereign guarantees.

Yet MDBs are also development institutions whose shareholder governments give them instructions to promote a wide range of activities in recipient countries that often go well beyond the traditional infrastructure lending that are their specialty. MDB conditionality requires borrowing governments to change policies in ways that would not be required by a private bank, and MDB loans must follow safeguard procedures designed to ensure that projects have no unintended damaging effects on issues such as the environment or third parties. The result is that MDBs have the most policy leverage in countries that do not have easy access to attractive, alternative sources of financing.

The ways in which member state countries design an MDB to fall on the continuum between most and least “banklike” will influence its environmental lending behavior because stand-alone environmental projects are often not high on the wish-list of projects borrowing countries want MDB loans to undertake.⁵² This means that a more banklike, client-driven MDB will generally

⁵⁰ Kapur et al. 1997; Einhorn 2001; Fidler 2001; and Mallaby 2004.

⁵¹ Even where problems are attributed to the Bank president, who can be seen as an agent of member state principals, the question is why has the president-as-agent been able to exert so much influence on Bank behavior?

⁵² World Bank 2001.

face fewer incentives to design environmental activities than a less banklike MDB.⁵³ Relatively more banklike MDBs also have fewer staff, because they depend on borrowers to come to them with ideas. The European Investment Bank (EIB), for example, one of the most banklike of MDBs, lends more than the World Bank each year, but contains a staff approximately one-tenth the size of the Bank's.⁵⁴

The World Bank's position along this spectrum has become confused in recent years, which has affected its ability to carry out some of its environmental goals. It has historically been among the least banklike of MDBs, given its record of lending in areas such as health, nutrition, and education. However, under Wolfensohn's tenure, the pendulum swung in the other direction, reflecting a number of steps taken since the mid-1990s to be more client driven. The goal of greater Bank accountability to borrowers has few critics, yet it also reduces borrower demand for stand-alone environmental projects. As the Bank has noted, "Many developing country governments view international concern over environmental problems in their countries as intrusive and likely to impede development."⁵⁵

Relatively more demand-driven MDBs are more dependent on the borrower's interest in the funding of particular types of projects. This means that even if the Bank's most powerful principals continue to use their leverage to promote more environmental lending and tighter environmental policies, their plans may be thwarted where there is tepid interest from recipient countries. In addition, while the degree to which an MDB is demand driven shapes the types of projects an MDB finances, it does not tell us whether its overall portfolio seeks to avert negative environmental impacts. In other words, one can imagine the possibility of a more banklike MDB that has few stand-alone environmental projects but addresses the environmental impact of its work through safeguard procedures and policies. The following subsection addresses the issue of how to measure MDB environmental behavior.

Defining, Measuring, and Engaging in Environmental Behavior

While there is agreement within the NGO community and parts of the World Bank that environmental reform within the Bank is far from an unqualified success, it is also true that defining and measuring the Bank's environmental behavior is a complex task. This complexity is further evidence of challenges on the delegation side of the P–A relationship, in that what is being delegated is ultimately difficult to precisely define and measure. This creates some degree of wiggle room for Bank staff in their environmentally related work. Even when MDB shareholders have called on management and staff to improve MDB environmental lending and policies, and when shareholders have also instituted various mechanisms to encourage such improvements, the translation process is not straightforward for a variety of reasons. For example, most of an MDB's activities put pressure on the environment. Investment projects in agriculture, energy, industry, urban development, transport, and poverty reduction almost always have environmental implications, since they involve clearing land, using natural resources, emitting pollutants, promoting economic growth, and so on.

There are certainly areas where economic development and environmental improvement easily overlap in what the Bank calls "win–win" combinations, such as projects or programs

⁵³ See Gutner 2002 for a comparative study of three MDBs, which shows a correlation between how "banklike" the MDB is, and the depth and scope of its environmental activities.

⁵⁴ The majority of EIB lending is to EU member states. However, more than 15 percent of its lending is to non-member states.

⁵⁵ World Bank 2002a, 5.

requiring the removal of energy subsidies, but these do not account for the bulk of MDB portfolios.⁵⁶ Conversely, there are areas of lending where environmental objectives may directly clash with economic development or poverty reduction objectives, such as when new power plants are built, creating a new sources of greenhouse gas emissions, or rainforests are cut down to make way for highways. Trade-offs can also occur in more subtle areas such as budget allocation. The Bank's 2001 environmental strategy document noted "the Bank's environmental activities have to compete for staff and budget with sectors such as health, education, social welfare, and rural development, which more directly address issues of poverty."⁵⁷

How, then, can an MDB show that it is addressing environmental issues in its work? Most MDBs define their environmental performance in terms of funding objectives and degrees of compliance with due diligence or safeguard procedures. The first category includes loans the banks have agreed to finance for projects with primary environmental goals – such as pollution abatement or nature protection – or significant environmental components. The second category includes the banks' procedures for ensuring that all projects try to mitigate or avert environmental degradation. One can also include research on the environment, agenda-setting efforts, and other environmental capacity-building efforts that may take place outside of traditional loans. Indeed, the World Bank's OED report on Bank environmental performance measured performance in the areas of stewardship (helping borrowers to develop priorities and institutions), mainstreaming, safeguards, and building awareness about pressing global issues.⁵⁸

These definitions are imperfect measures of environmental performance for several reasons. First, as noted above, in terms of environmental lending, the aggregation of project loan totals or components or numbers of projects in a specific category reveals nothing about project design or implementation (such as whether the project actually helped or harmed the environment), and so may be a measure of intention but not action. To date, there are no aggregate analyses of how completed Bank projects have actually impacted on specific environmental issues or fulfilled project environmental objectives.⁵⁹ Second, using the aggregate amount of "environmental lending" as a sign of a trend in changing environmental behavior ignores the fact that some of an MDB's smaller projects are actually more effective in their environmental impact than larger, complex projects that are often more difficult to implement.⁶⁰ Third, projects not explicitly designed with environmental components may also be environmentally beneficial, such as projects to modernize industry in ways that result in more efficient energy use. Fourth, there are no simple ways to quantify whether an MDB's research, agenda setting, and other non-lending activities shape domestic policy reform or contribute to tangible environmental improvements.⁶¹

⁵⁶ See World Bank 1992 for details of such "win-win" areas. The existence of conflict between economic growth and environmental sustainability is also at the heart of the broader discussion on what "sustainable development" means and how it can be undertaken. It is also the case that the World Bank's top areas of lending are precisely those where it is most challenging to integrate environmental issues, such as electric power/energy and transportation. In terms of portfolio composition, between fiscal 1990 and 2000, just under 50 percent of the Bank's investment projects required a full or partial environmental assessment, meaning that the projects were seen as having significant or potential adverse environmental impacts. World Bank 2000a.

⁵⁷ World Bank 2001, 40.

⁵⁸ World Bank 2002a, xiii.

⁵⁹ There are numerous internal and external analyses of specific projects. As an example, the Bank's OED reviews Bank lending to individual countries. NGOs also commonly review projects, but tend to focus on problematic projects.

⁶⁰ World Bank 1997, 12.

⁶¹ Goldman 2001.

To illustrate, the World Bank has been at the forefront of MDB efforts to more accurately define environmental objectives and measure behavior, and its conclusions have evolved over time. For example, for the region of Central and Eastern Europe during 1990–94, Bank documents contained at least three very different totals for environmental lending, ranging from \$18 million to \$1 billion.⁶² The Bank's efforts to refine its definitions and measurements in the 1990s included attempts to distinguish between projects with "primary environmental objectives," those with "major environmental components," and those with simply "environmental components." Projects in the first category include those where the costs of environmental protection or benefits exceed 50 percent of project costs or benefits, and tend to include water supply and sewerage, environmental capacity building, and forestry projects. Later definitions of the Bank's environmental portfolio included projects in the areas of water resources management and pollution management, environmental policy and institutions, and land management. Consensus has by no means been obvious.⁶³ A number of Bank officials and studies have been openly critical of attempts to define and treat the environment as a stand-alone sector of lending, rather than something that should be integrated into all of its works. Sectoral treatment, they argue, creates competition between environmental units and other sectoral units seeking "funds and slots in country lending programs."⁶⁴

By the late 1990s, the Bank began to emphasize the importance of "mainstreaming" the environment, or integrating environment into all projects, programs, CAS, sectoral and structural adjustment lending, and economic and sector analytical and advisory work. Gradually, the Bank has downplayed standalone environmental lending, and has placed more emphasis on identifying environmental components in individual projects. This has occurred as adjustment lending has increased as a percentage of Bank lending, compared with project-based lending. In this way, the Bank has chosen to emphasize its safeguard procedures, analytical work, "ability to leverage policy dialogue," and discrete environmental components of projects, rather than individual environmental projects and outcomes. The 2002 OED evaluation also admitted that the Bank had no consistent criteria for monitoring its attempts to mainstream the environment, noting that "the lack of guidelines for monitoring of [sic] the extent of mainstreaming is itself a cause for concern."⁶⁵

It is important to note that the challenge of accurately measuring environmental performance does not undermine the fact that there is so much discrete evidence and widespread recognition that performance has been mixed, as discussed above. And while these evident weaknesses in environmental performance may reflect, or be exacerbated by, opportunism on the part of the Bank as agent, they share as a source problems on the delegation side of the P–A relationship. The argument, however, should not be interpreted as a means for an institution to explain away poor performance. Instead, I am suggesting that strategies for reducing problems of antinomic delegation are different from strategies aimed at reducing agency opportunism. Classic agency theory prescriptions emphasize screening, oversight and monitoring mechanisms. This has indeed been the Bank's emphasis, as seen in the creation of the Quality Assurance Group and Quality Assurance and Compliance Unit. Yet problems stemming from antinomic delegation

⁶² Gutner 2002.

⁶³ See Acharya and Abuyuan (2002) on multiple instances of Bank staff placing projects in incorrect categories, misusing sector codes involving the environment, and creating a coding system where categories such as environment and urban sector greatly overlap.

⁶⁴ World Bank 2002a, 17.

⁶⁵ World Bank 2002a, 9.

require attention to where and why goals may clash, ways of improving institutional leadership, clarifying what is being delegated, and more precise methods to define and measure the performance of complex tasks.

Chain of Delegation

The broader P–A literature recognizes that principals may also be agents and vice versa, depending on which stage of the policy process is being analyzed. For example, the US Congress is an agent to voters, but a principal to other bureaucratic agencies. The more points at which delegation is taking place, the more opportunities there are for agency slack. But scholars risk getting carried away by pointing out all the different areas where one actor is delegating to another; such as voters delegating to Congress, which delegates to Treasury, which delegates to the US Executive Director at the World Bank, which contributes to delegation (via its role on the board) to Bank management and staff, which delegate to consultants and recipient country ministries, which delegate to specific project managers, and so on. For the purposes of analytical clarity, I choose to focus on the two major levels of P–A relationships characteristic of international aid organizations; one with shareholder states as a set of collective principals delegating to the organization as an agent; and the second with the organization as principal delegating to the aid recipient(s) as agent.

As noted above, the existence of these two levels of P–A relationships is not well recognized in the IO field, where most analysis focuses on the first level, particularly on why member state principals delegate to IO agents, and how they try to control IO behavior. The problem with stopping analysis at the level of organization-as-agent, is that while member states may take actions to reign in organization-agents that appear to be successful at the organizational level, these gains may prove illusory when one opens the analytical lens wider to see how such actions play themselves out through an IO's activities. Focusing on only one level of delegation limits the application and efficacy of P–A analyses to the behavior and performance of IOs. The fuller analytical picture reveals more starkly the challenges of setting up mechanisms for accountability.

The tangle of P–A relationships and the difficulty of measuring some of the outputs create opportunities for any party to avoid accountability.⁶⁶ These problems are exacerbated by the fact that aid institutions are also characterized by an inherent break in the delegation chain, because the final beneficiaries of a project have no direct ability to shape the organization's control mechanisms.⁶⁷ Furthermore, MDBs have another unusual wrinkle in their governance, in that recipient countries wear two hats; one as members of the institutions, with varying degrees of influence on their boards, and one as recipients of their loans and other activities. That means that recipient countries at the World Bank, and other IFIs, are *both* principals in one set of P–A relationships, *and* agents in the other. This is significant, for example, in cases where powerful developing country shareholders, such as China or India, disagree with major developed country shareholders. The following subsection looks more closely at the sources of agency slippage at the major points in the Bank's delegation chain.

⁶⁶ Ostrom et al. 2001.

⁶⁷ Seabright 2002, 36.

Shareholder Principal–Institution Agent

The Bank's member state shareholders are represented through the board of governors and the board of directors. The governors generally consist of finance ministers, and they meet once a year to lay down the overall directives for the Bank, review the annual report, consider new membership, and so on. While the governors are the agents of member state governments, they are also principals delegating to the board of directors, which is responsible for the Bank's day-to-day operations, including approving loans and major Bank policies. The board is usually seen as the main political principal to the Bank-as-agent, since it is the primary channel through which member states are directly involved in its activities. However, the nature of the board's composition and the structure of its activities create conditions that weaken its ability to tightly control the institution.

The World Bank's (IBRD's) board consists of 24 executive directors (EDs) representing 184 countries.⁶⁸ Only the US, France, Germany, Japan, Britain, Saudi Arabia, China and Russia have their own EDs, and all other countries are grouped into constituencies represented by one ED. The size of these groups ranges from four to over 20 countries, with several containing more than 10 members. Each country's share of the vote reflects the size of its contribution to the Bank's capital, which roughly reflects the size of its economy. The result is that major donors have the most power on the board, and most member states do not have a direct voice or vote.

Other characteristics of the board also affect its oversight abilities. First, board directors have a short tenure of two-year, renewable appointments, and turnover is relatively high. In terms of loan approval, which is one of the board's most important activities, most EDs receive detailed information about most loans at the end of the project cycle, which limits their ability to influence the projects.⁶⁹ The board also receives shortened, summary versions of project documents, and its procedures have been streamlined so that some projects do not even come up for a formal vote. If a project does not involve a new country, has no problematic component, and no ED seeks to raise an issue related to it, the project is automatically approved. Given the heavy volume of projects going to the board each year, ED officials do not have the ability to carefully assess each one. Finally, voting procedures at the World Bank encourage consensus, and formal voting is rare. If a project is contentious and a formal vote is taken, no single country has enough voting power to block the project without support from other members.

These features of World Bank governance ultimately give its directors more power in addressing broad issues of strategy, policy, and institutional design. But it also gives them less oversight in the types of projects Bank staff identify, and less say in how specific projects are designed and implemented.

Bank Principal–Borrower Agent

Examining the Bank as a principal to a recipient-country agent is useful in more precisely identifying the role that recipients may play in influencing what is widely seen as an aspect of "Bank behavior," or how the Bank puts its policies and strategies into practice. One can find examples where the P–A relationship "worked" at the first level of delegation, as the Bank designs environmental activities that reflect the strategic intention of some of the Bank's board

⁶⁸ The IDA's membership is slightly smaller, at 163.

⁶⁹ Recipient country directors do communicate with Bank staff involved in their countries. Rich country directors also have incentive to learn about projects in advance to encourage procurement to flow to their nation's companies.

members to “mainstream” the environment. But at the recipient-country level something may go wrong, resulting in activities that are not undertaken or are poorly undertaken. While it is analytically easier to separate an institution’s intentions from its activities, an examination of the latter is critical to achieving a fuller and more realistic picture of behavior, performance, and effects.

Recipient-country actors are agents in the sense that they are responsible for making sure the conditions of Bank loans and other activities are implemented as agreed. Compliance with Bank conditionality is subject to the usual problems such as moral hazard and adverse selection common to such delegation.⁷⁰ If recipients do not comply, disbursement may be halted. Recipients have incentives to use strategies to increase the amount of loans and credits received, or at least to ensure that the flow of funding is not stopped or slowed for any reason. These strategies may include withholding negative information about project implementation, pitting one donor against another, and hiding evidence of corruption. Agency slack may be increased by the fact that World Bank loans are often disbursed through a number of different actors, including the relevant recipient country ministry, the local government authority, the specific organization for whom the money is intended, and so on.⁷¹ Critics have also argued that the World Bank’s “clientitis” has made it harder for the Bank to cut off loan disbursements even where there is evidence that borrowing governments are violating major conditions. Rich and others have argued that one result is Bank complicity in corruption in large borrowers such as Russia and Indonesia.⁷²

In the case of World Bank environmental activities, an obvious form of agency slack at the recipient country level manifests itself when the recipient agrees to a Bank-funded environmental activity but is not committed to carrying it out or faces other incentives to drag its feet. There is certainly evidence that environmental activities work better in countries that are politically committed to addressing such issues, whether for economic, health, political, or ecological reasons. Indeed, lack of demand for environmental assistance is commonly recognized as one reason behind gaps between donor efforts to mainstream environmental priorities in bilateral aid programs and their assessment of the impact of aid.⁷³ The Bank has stated that weak domestic interest has contributed in “less than successful” staff efforts to address forest reform in Cameroon, water issues in Mexico, and industrial pollution in India.⁷⁴

Weak borrower commitment also hinders the implementation of NEAPs. As noted above, this was a diagnostic exercise undertaken by the Bank beginning in the late 1980s to help countries prioritize their environmental problems and be aware of different policy options that may be undertaken to address these problems.⁷⁵ NEAPs were supposed to be country owned, while in practice the Bank assisted countries in preparing them. The implicit assumption was that NEAPs provide a guide for governments to use in developing and implementing environmental reform policies and in prioritizing projects. While helpful knowledge-creation exercises, there was nothing in the NEAP that compelled countries to implement it. The result was that while some NEAPs were perceived to be successful, others were seen by recipients

⁷⁰ Murrell 2002.

⁷¹ Murrell 2002.

⁷² Rich 2002, 34, 47–8.

⁷³ For example, Flint et al. 2000.

⁷⁴ World Bank 2002a, 17.

⁷⁵ There are actually a growing number of diagnostic exercises, with many of the Bank’s regional units developing their own tools. A recent internal review has argued that this work has been “unsystematic and sporadic.” See Pillai 2002.

simply as hoops to jump through in order to meet donor requirements. As the Bank's 2001 environment strategy document noted, many countries viewed NEAPs as "a product rather than a process that needs to be nurtured and integrated into development strategies."⁷⁶

The Bank has recognized that it lacks adequate measures to encourage borrowing countries to pursue environmentally oriented activities. The OED's 2002 evaluation of the Bank's environmental performance pointed out that some borrowers and Bank task managers believe that environmental mitigation actions can be "an added cost and burden that retards project execution."⁷⁷ It noted that in some countries, "using GEF funds is almost the only way to get an environmental project into the program."⁷⁸ The 2008 evaluation was equally blunt, pointing out that many governments simply are not committed to environmental objectives.⁷⁹ Agency slack is only one source of implementation problems. Project implementation may be hurt by procurement or contracting delays, weak local institutions, overly ambitious or ambiguous expectations or assumptions, shifting economic or political conditions, and misperceptions between donors and recipients, or between different recipients.⁸⁰ The Bank's Quality Assurance Group developed 12 different criteria for "projects at risk," which include factors such as weakness in a project's legal covenants, financial performance or management, safeguards, supervision, disbursement, and weakness in a country's economic management.⁸¹ These problems may be traced back to delegation or agency problems, or other technical, political, and organizational weaknesses that are more difficult to categorize and may not necessarily reflect agency slack. The point is that the identification of performance problems reflecting agent slippage at the recipient level directs analytical and policy attention to oversight, monitoring and contracting tools useful for correcting such problems. Yet the success of tools such as stricter procurement policies, stringent conditionality, and enhanced supervision and other incentives to improve implementation ultimately depend on the political will of the Bank and its major donor members.

Conclusion

The magnitude of the delegation and performance problems facing IOs today could hardly be greater. Both the scholarly and policy worlds must further develop and sharpen analytical tools that can better pinpoint and correct political and institutional weaknesses that affect performance. Neither the scholarly nor the policy literatures offer powerful explanations for inconsistent World Bank performance. The policy literature often blames the Bank's poor performance on mandates that are themselves flawed. Much of the scholarly literature's lines of debate, in turn, demarcate power politics from organizational and/or sociological explanations of IO behavior, but focusing on one set of variables at the expense of another offers partial and unsatisfactory explanations of the factors accounting for mixed or poor institutional performance.

Agency theory offers a potentially powerful tool for identifying major sources of gaps between IO mandates and performance when it explicitly recognizes and analyzes problems inherent to the delegation side of the P–A relationship as well as problems revealed by studying

⁷⁶ World Bank 2001, 26.

⁷⁷ World Bank 2002a, xvi.

⁷⁸ World Bank 2002a, 11.

⁷⁹ World Bank 2008, xxi.

⁸⁰ Brinkerhoff and Crosby 2002; and Hirschmann 1967.

⁸¹ World Bank 2002b, 16.

an IO as both an agent and a principal. As such, it expands the rationalist research agenda in the field of IO, offering a more nuanced set of tools in a field often criticized for overly blunt analytical approaches. It offers a rationalist perspective for addressing the sticky or dysfunctional behavior that is more widely analyzed by historical institutionalists and constructivists.

The case of the World Bank shows how an examination of the nature of the tasks being delegated and the incentives shaping both sides of the delegation relationship can explain key sources of disconnect between an institution's stated goals and on-the-ground implementation. Understanding whether a problem is caused by complex delegation or agent opportunism, for example, more precisely reveals powerful sources of institutional inertia and weak performance, but also clearly influences the options for correcting them. Modifying the traditional P–A model is essential in cases where oversight and monitoring tools are clearly necessary but not sufficient to solve performance problems.

This analysis also has significant policy repercussions. First, delegation complexities that require actions such as streamlining a large IO's mission require political will and leadership from major member states that are significantly more difficult to obtain than agreement on more specific screening, oversight, and monitoring mechanisms. The latter can contribute to institutional adaptation without getting at the root of the problem.

Second, the challenges of being a financial institution and a development agency have only intensified over the years, thanks to mission creep. Many of the gaps between mission and performance are not likely to disappear. The realistic policy response may well be how to narrow rather than remove individual gaps, such as those between environment and poverty reduction. A profitable area of future research would be a focus on the extent to which the Bank is responding to performance criticism by putting more emphasis on activities that emphasize the *process* of policy reform over more tangible, traditional investment projects. This is the latest iteration of a broader shift over the past 20 years in donor financing from traditional investment projects (such as infrastructure) to the promotion of policy reform.⁸² Certainly, the World Bank is engaged in a growing number of such activities that focus on policy reform processes – such as bringing stakeholders together to discuss action plans, global issues, regional cooperation, building partnerships, encouraging “country-owned” processes for poverty reduction, offering “knowledge activities,” and so on. Indeed, the “fiscal 2003 highlights” in the Bank's 2003 Annual Report devotes one paragraph to its lending for the year, and the remaining six to process-oriented activities, including a conference organized on development economics, a new investment partnership, a “development marketplace” linking entrepreneurs to resources, and an urban research symposium.⁸³ This emphasis on process inputs clearly offers the Bank ways to show it is improving its accountability and transparency, and many of these activities may be truly excellent ways for the Bank to achieve its more tangible goals. Yet, process input activities may also deflect attention from performance measured as successful implementation of loan-based projects and programs. And, as Martens has warned us, when aid shifts from investment projects to activities with difficult-to-measure outputs, such as institutional reform, the old problems of moral hazard and adverse selection remain alive and well.⁸⁴

⁸² Dollar and Svensson 2000; and Brinkerhoff and Crosby 2002.

⁸³ World Bank 2003.

⁸⁴ Martens 2002.

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28 Greening development finance: cases from the World Bank Group

Susan Park

The World Bank Group (WBG) is a constellation of international organizations (IOs) with global reach. The group includes the International Bank for Reconstruction and Development (IBRD), the International Finance Corporation (IFC), the International Development Association (IDA), the International Center for the Settlement of Disputes (ICSID), and the Multilateral Investment Guarantee Agency (MIGA).¹ The World Bank here refers to the IBRD and the IDA. The World Bank wields significant material and ideational power over a large portion of the globe through its financing policies in developing countries. Traditionally, the World Bank has offered cheap loans to developing countries where private financing was unavailable, and has mobilized and co-financed loans and projects with the private sector, to provide a life line to credit-poor states. From the 1980s, the WBG has advocated neoliberal economic policies, often described as the “Washington Consensus.”² Critics challenge the perceived omnipotence of the World Bank in spreading globalization and determining development agendas.³ Since the early 1980s, environmental groups have documented numerous cases in which World Bank projects have contributed to environmental devastation and community dislocation.

More recently, the Bank’s incorporation of environmental and social issues has sparked debates over whether it promotes a “Post-Washington Consensus” development agenda, liberal environmentalism,⁴ or even “Green Neoliberalism.”⁵ This chapter provides an account of the impact of the “greening” process on the World Bank and two of its lesser-known affiliates: the IFC, a private sector lender and investor, and the MIGA, a political risk insurer. Transnational environmental advocacy networks (TEANs)⁶ have been vocal in criticizing the activities of these agencies as private sources of capital growth and environmental protection over private sector development lags. I argue that through TEAN influence and member states’ pressure, the WBG agencies have adopted environmental norms. Each agency has nonetheless interpreted these norms differently in line with their separate bureaucratic cultures: in the World Bank environmentalism is rule based, while it is a market-based sustainable development in the IFC and limited to market following in MIGA. By examining IFC and MIGA, neither of which has thus far received much attention, a more accurate picture can be drawn of the WBG’s role in financing projects with significant environmental impacts, as well as its reach and ability to change.

¹ The Global Environment Facility (GEF) is not part of the WBG because the Bank is merely an implementing agency for GEF funds. The ICSID is an arbitration board that does not interact with environmentalists and is not analyzed.

² Williamson 1990.

³ Goldman 2005; and Woods 2006.

⁴ Bernstein 2001.

⁵ Goldman 2005.

⁶ Keck and Sikkink 1998.

This chapter argues that nonstate actors such as TEANs along with member states socialized the WBG agencies to change their policies to reflect environmental norms. In addition to changing the behavior of the WBG agencies, the process of socialization or “greening” changed their identities. They have evolved from being primarily neoliberal economic entities to become sustainable development lenders, although market-focused sustainable development prevails. To this end, the chapter first outlines the theory behind the process of “greening” the World Bank, then the role of identity in explaining the different expression of environmentalism in each agency.

How Environmental Concerns Have Come to Matter in Financial Agencies

Analyzing the way environmental norms were taken up in the World Bank, the IFC, and MIGA provides a comparison of the way international environmental norms influence identity change within IOs. The central argument is that IOs such as the World Bank, the IFC, and MIGA are shaped not only by their member states but by nonstate actors such as TEANs who advocate environmental norms. Norms are defined as collective expectations about proper behavior for actors with a given identity.⁷ Nonstate actors such as TEANs can shape world politics.⁸ This shaping occurs through socialization, which is defined as a process whereby international norms influence actors’ (IO) behavior by reconstituting their identities. This is important because IOs are recognized as norm diffusers within the international system.⁹

Socialization is a key concept for understanding how actors embrace new ideas in international politics. Examining the processes of socialization reveals how actors’ (IO) identities shift to accord with new international norms. IO identities evolve over time and may change through interaction. IOs begin to establish new roles to conform to new norms as the social structure informs but does not determine how agents behave. In this context, TEANs aimed to socialize the WBG by shaping the identities of its agencies to become sustainable development lenders, investors, and underwriters. IOs, such as the WBG organizations, have internalized norms such as sustainable development spread by TEANs, when they act in accordance with the new norms and believe themselves (and are viewed by others) as being sustainable.

Influence of Nonstate Actors

The central thrust of the argument is that IOs can internalize ideas by taking up different ways of thinking about and operationalizing their state-determined mandates. Socialization can be broken into two distinct but simultaneous processes: direct and indirect. Within both direct and indirect socialization, three micro-processes of socialization are evident: persuasion, social influence,¹⁰ and coercion.¹¹ *Direct socialization* is where nonstate actors such as TEANs, interact with IOs to spread norms that constitute the social structure. The networks attempted to persuade the WBG of the relevance of environmental norms through ongoing campaigns of meetings, letter, petitions, emails, and phone calls. Acts such as these are attempts at persuasion. Persuasion is an ongoing, iterative process that involves “changing attitudes about cause and effect in the absence of overt coercion.”¹² TEANs also engage in social influence involving the

⁷ Finnemore and Sikkink 1998, 891.

⁸ Keck and Sikkink 1998.

⁹ Finnemore 1996.

¹⁰ Checkel 1999; and Johnston 2001.

¹¹ Risse et al. 1999; and Wendt 1999.

¹² Checkel and Moravcsik 2001, 221; and Johnston 2001, 496, 499.

distribution of punishments including “shaming, shunning, excluding, and demeaning, or dissonance derived from actions inconsistent with role and identity” and rewards such as “psychological well-being, status, a sense of belonging, and a sense of well-being derived from conformity with role expectations.”¹³ For example, TEANs influenced the World Bank agencies to stop environmentally damaging projects in Nepal (the Arun III dam) and China (the Greater Western China Poverty Reduction) as a result of mass opposition. Social influence was expressed through demonstrations, protests and petitions at the WBG project sites and headquarters, and praise or condemnation through press releases, web posts, and publicity stunts. Along with coercion through member states, these processes were enacted against the World Bank, the IFC, and MIGA in relation to their projects, policies, and institutions as discussed below.

Coercion and Member States

Indirect socialization is a process in which member states are first influenced through persuasion in order to then coerce the IO. This occurred when TEANs first mobilized against the World Bank in the 1983 “Multilateral Development Bank” reform campaign which aimed to pressure powerful member states such as the US, Western European states, and Japan to stop the environmental destruction of the Polonoroeste project in Brazil and the Narmada dam in India.¹⁴ TEANs socialized the WBG indirectly by influencing powerful member states who then demanded changes within the IO. For example, TEANs sought to limit IDA replenishment to halt the negative environmental impacts from World Bank loans. The IBRD maintains IDA, although the latter has separate funds provided by voluntary member state contributions. TEANs were able to influence the Bank by threatening to have its funding cut.¹⁵ Changing an IO’s actions to stop environmentally destructive practices was part of the socialization process: it influenced the IO’s interests (whether and how it approves projects) and ultimately its identity (what it believes its role to be).¹⁶ In the cases of the World Bank and the IFC, as business as usual lending practices were increasingly considered unacceptable for international development institutions and as persuasion and social influence were brought to bear, these IOs began to rethink how to maintain their leadership as development lenders and investors. They identified with, and then promoted, previously imposed sustainable development ideas, as explained more fully below.

Indirect socialization occurred simultaneously with direct socialization. Indirect socialization is evidence of more than just material power because powerful states such as the US were shaped by TEANs to reflect sustainable development norms during the process. For example in 1989 the Working Group on Multilateral Aid or the “Tuesday Group” was created for the US and nongovernment organizations (NGOs) within the TEAN to share information and come to common agreement on the US position on multilateral development bank projects and policies. Ongoing US policy toward the WBG has fundamentally shifted to incorporate sustainable development rather than merely being used to pursue other state objectives.

While rationalists point to the role of powerful states in explaining IO change, there is much more than brute power involved in the take-up of environmental ideas in the WBG. From the early 1980s, the process used to socialize the Bank and the IFC has shifted from confrontation

¹³ Johnston 2001, 499.

¹⁴ Hunter 2008, 452.

¹⁵ Rich 1994, 125.

¹⁶ Risse et al. 1999.

to discussion as these agencies have become more responsive to environmental norms. For example, the Bank now engages in dialogue with TEANs as well as partnerships with moderate conservation NGOs such as the Worldwide Fund for Nature (WWF) on forest conservation, and with Conservation International to protect biodiversity hotspots.¹⁷ Combined, direct and indirect socialization involving persuasion, social influence, and coercive pressure have reconstituted the WBG agencies' identities to become sustainable development advocates.¹⁸

The Role of Norms in IO Change

That environmental norms were taken up differently in three WBG agencies indicates that identity shapes the way in which IOs internalize international norms. Although TEANs influenced three of the WBG affiliates in exactly the same way (through their projects, policies, and institutions), based on exactly the same arguments, with exactly the same member-state power structure within each organization, their influence produced differing responses in the WBG agencies. The sustainable development norms espoused by TEANs influenced, in different ways, private sector-oriented financial institutions with similar development goals but distinct professional identities. This suggests that an alternative, nonstate centric theoretical framework is needed to analyze how IOs are situated within the international political economy and the complex interrelationship between states, IOs, and nonstate actors.

Within international relations two theoretical approaches attempt to explain IO change. A constructivist perspective, based on norms, culture, and identity counter poses rationalist theories. The latter includes neorealism, neoliberal institutionalism, and the subsequent principal-agent (P-A) model, which are derived from microeconomics and assume that all actors are utility-maximizing egoists. Early constructivist scholarship posited that international norms were conveyed by IOs (and NGOs) to states, thus shaping state identities and behavior.¹⁹ Both IOs and NGOs can be norm entrepreneurs, spreading ideas and shaping state practices on human rights, the environment, and security.²⁰ Constructivists argued that IOs have some autonomy from states and can diffuse norms to states through their operations.²¹ Constructivists refuted the one sided state-IO relationship assumed by rationalists, where states dictate IO behavior. Yet constructivists were initially more concerned with articulating an independent role for IOs than identifying the genesis of IO ideas.²²

In contrast, neither neorealism nor neoliberal institutionalism advanced a significant role for IOs, concentrating on state cooperation, competition, and conflict; although the latter does view IOs as furthering states' interests.²³ An alternative rationalist hypothesis emerged to account for IO change based on the P-A model.²⁴ The model advanced IOs as agents, but gave primary explanatory power for IO actions to member states (principals). The P-A model seeks to explain the disjuncture between principal interests and IO (agent) actions or why IOs do not meet state demands.²⁵ Advocates of the P-A model point to the asymmetrical information between principals and agents where the latter may conceal information from the principal that could

¹⁷ World Bank 2008.

¹⁸ Draws on concepts in Wendt 1999, 268.

¹⁹ Finnemore 1996.

²⁰ Finnemore 1996.

²¹ Barnett and Finnemore 2004, 3–4.

²² Finnemore, 1996 19.

²³ Keohane 1984.

²⁴ Nielson and Tierney 2003; Gutner 2005; Hawkins et al. 2006; and Nielson et al. 2006.

²⁵ Gutner 2005.

be used against it to sanction “deviant behavior.” Rationalists examine how principals can change incentive structures for the agent to meet principal demands.²⁶

Although the P–A model is a plausible account of IO change, a close investigation of the WBG’s “greening” points to the crucial role of TEANs in challenging WBG practices and in establishing appropriate behavior for development institutions. Significant input from environmentalists determined that the WBG agencies *should* change, including *how* they should do so, both through direct interactions with the WBG and indirectly through powerful member states.²⁷ Attempts to analyze the WBG using the P–A model overlook the role of nonstate actors in framing environmental debates, and in guiding WBG principals via interactions with government agencies. Instead, the P–A model would suggest change occurs via a “top-down” path with change directed by states to IO management to IO staff. This overlooks contestation between IOs, states, and nonstate actors over the appropriate IO behavior.²⁸ To ignore or downplay the role of TEANs in promoting sustainable development norms fundamentally mischaracterizes empirical accounts of change within the WBG.

I propose that the WBG internalized norms from TEANs. Environmental norms shaped the WBG’s identities through TEAN socialization rather than member states merely imposing change. Further, IO identities are shaped by socialization, but how they change is distinct to each organization. Actors do not just respond to new ideas; they internalize them and reconstitute them, making them part of their identities thus changing them in the process. The cause of change within the World Bank, the IFC, and MIGA cannot be simply reduced to the interest-based politics of member states or Bank management.²⁹ Rather, TEANs *informed and helped shape* member states’ decisions to implement new environmental standards.³⁰

Evidence of World Bank-NGO relations have been used to show how activists pressured the organization to broaden its conception of development to include the environment.³¹ Nonstate actors such as TEANs are driven by a “principled idea or value that motivates their actions.”³² They include NGOs, activists, development practitioners, and others that collaborate on a particular idea (environment), who are organized into campaigns (project, policy, or institutional change) and are usually against someone or thing (the WBG).

Environmental changes such as the introduction of environmental and social safeguard policies within the World Bank are well documented. Environmental activists through TEANs campaigned against World Bank projects and pushed for institutional change, while Bank member states established new policies and oversight mechanisms for the organization.³³ For example, in the 1990s and 2000s the Bank created the Environment and Socially Sustainable Development Department Vice-Presidency; a Bank-wide environment strategy in 2001, and established the Quality Assurance Compliance Unit to monitor and improve the use of environmental rules.

Comparing how the World Bank, the IFC, and MIGA have responded to sustainable development norms espoused by TEANs differs from previous work on the World Bank’s environmental shift both theoretically and empirically. Theoretically, it brings the role of

²⁶ Nielson et al. 2006, 111.

²⁷ Rich 1994; Fox and Brown 1998; and Keck and Sikkink 1998.

²⁸ Nielson and Tierney 2003, 241, 252; Gutner 2005, 17; Hawkins et al. 2006; and Nielson et al. 2006.

²⁹ Nielson and Tierney 2003; and Nielson et al. 2006.

³⁰ Keck and Sikkink 1998.

³¹ Rich 1994; Wade 1997; and Fox and Brown 1998.

³² Keck and Sikkink 1998, 1.

³³ Rich 1994; Fox and Brown 1998; Keck and Sikkink 1998; Gutner 2002; and Nielson and Tierney 2003.

TEANs to the forefront of accounts of shifts within the WBG in order to identify which processes lead to change within IOs.³⁴ IO scholars have long recognized the influence of the external environment in shaping the agenda and actions of organizations, although they are only now distinguishing between material and ideational factors. Interactions between TEANs and the WBG are examined through each agency's projects, policies, and institutions. TEANs have challenged all aspects of these IOs, questioning the very basis of WBG actions and ideas.

The Role of Identity in Policy Change

The World Bank, the IFC, and MIGA responded to the environmental challenge by following a similar pattern; first ignoring and then rejecting environmental claims before engaging with the idea of sustainable development. However, each organization varied its engagement with environmentalists and the extent to which they subsequently incorporated environmental practices. For example, the World Bank employed "rule-based" environmentalism while the IFC focused on "market-oriented" sustainable development and MIGA retained a limited "market-following" approach.

The main vehicle for spreading environmental norms was through TEAN campaigns to counter the activities of the World Bank, the IFC, and MIGA in lending, investing, and underwriting environmentally damaging development. TEANs highlighted the destructive nature of WBG practices and used micro-processes of persuasion, social influence, and coercion through member states to make these IOs aware of their behavior and change it. Socialization occurred when the new norm became internalized to the point where each IO has begun to see its role through the new norm. The World Bank and the IFC, less so MIGA, now see themselves as sustainable development lenders, investors, and guarantors respectively and (the Bank and the IFC) are becoming recognized as such by TEANs and states.

Each organization's identity determined how it would engage with sustainable development norms and TEANs, which in turn reconstitutes the norm in the process. For example, engagements between TEANs and the World Bank led the organization to establish a rules-based sustainable development. In ongoing interactions with TEANs the Bank created detailed environmental, social, and information disclosure rules by which it agreed to be bound. It established elaborate environmental and social monitoring and evaluation functions to ensure that it met these agreed-upon rules and created an accountability mechanism to ensure that its practices did not adversely affect people at the project site. Changes to those environmental rules and practices continue to evolve in relation to social interactions between the Bank, states, and TEANs.

This process was repeated in the IFC. By the early 2000s, the IFC had begun to internalize how it could be a leader in sustainable finance. A consolidation of the IFC's environmental shift took place in 2001 when it instituted a Sustainability Initiative to center its approach to sustainable development lending and investment. It initially adopted the World Bank's rules-based approach as a result of interactions with TEANs by adapting the Bank's environmental and social safeguards in 1998. By 2006, the IFC determined that the best means to incorporate environmental norms was through reconstituting sustainable development for a private sector financier. It converted its safeguard policies into more flexible performance standards that it argued was evidence of going "beyond compliance." Sustainable development norms are now incorporated into the IFC's triple-bottom-line assessment of its financial, environmental, and

³⁴ Checkel and Moravcsik 2001, 225.

social return on capital investments.³⁵ This market-based sustainable development approach clearly identifies the business case for sustainability and advocates international best practice.

MIGA's response was based on the assumption that sustainability had nothing to do with political risk insurance. MIGA underwrites projects in developing countries rather than investing in a project sponsor such as the IFC or lending for a development project such as the Bank. MIGA's early reactive and reluctant stance is evidence of its resistance to sustainable development norms, unlike the identity shifts now apparent within the Bank and the IFC. While it adopted the Bank's environmental and social safeguards completely in 2002, repeated engagements with TEANs had little traction until the organization restructured in 2004, which provided space for new ideas. Along with ongoing TEAN pressure, this restructure led to positive changes in MIGA: it improved its evaluation practices from 2005³⁶ and adopted the IFC's performance standards in October 2007. From 2007, MIGA required guarantee holders to provide information on the environmental impacts of Category B (medium environmental risk) projects, where previously MIGA "was not even aware that projects failed to meet its guidelines" as they were not required to assess them.³⁷ The changes undertaken by the organization reflect the need for the agency to follow the market as a political risk insurance identity. MIGA has begun to follow the IFC, along with 35 OECD export credit agencies in meeting minimum standards for underwriting political risk in developing countries.

The Role of TEANs in Greening the World Bank

With regard to the World Bank, TEANs first used campaigns to oppose the Bank's operations in order to prevent or mitigate the negative environmental impacts of Bank projects. Beginning in the early 1980s with the high-profile cases of Polonoroeste in Brazil and Narmada in India, TEANs challenged the Bank through persuasion, social influence, and coercion. TEANs then tried to influence Bank policies in areas such as creating environmental and social safeguards, and information disclosure, which the Bank did in the 1990s. The full suite of environmental and social safeguards established by the Bank came into effect from the late 1980s and was revised in the 2000s with ongoing TEAN engagement. Indeed, TEANs "essentially set the environmental and social policy agenda of the FIs [financial institutions]" where Polonoroeste and Narmada "led more or less directly to reforms in World Bank policies relating to environmental assessment, resettlement and indigenous peoples."³⁸

The networks then undertook direct and indirect socialization to pressure for institutional mechanisms to ensure greater environmental accountability and adherence to strengthened safeguards. This led to the creation of the Inspection Panel in 1993 to give recourse to people adversely affected by Bank projects. Throughout the process, the Bank was challenged to re-evaluate its ideas. By undertaking such practices repeatedly, the Bank began to view itself as a sustainable development lender. This is fitting as the Bank is now the largest "multilateral source of environment-related financing" and its rules are seen as constituting customary international law.³⁹ The World Bank's implementation of environmental policies, project processes, and institutional oversight mechanisms are well documented and reflect a rule-based approach to environmental issues. Indeed there has been an ongoing process of identity change

³⁵ IFC 2002.

³⁶ MIGA 2007, 3, 7.

³⁷ World Bank 2008, 63, 64.

³⁸ Hunter 2008, 457.

³⁹ Hunter 2008; and World Bank 2008, xvi.

within the WBG whereby the Bank continues to internalize sustainable development as a result not only of state based power politics but of TEAN socialization.

TEAN Influence over the IFC and MIGA

Following the rise of foreign direct investment (FDI) to developing countries in the 1990s, TEAN attention has turned to less well-known financial institutions such as the IFC, MIGA, and export credit agencies. Global civil society opposition has led to the politicization of finance. Both the IFC and MIGA have grown significantly within the past two decades with rapid private investment in developing countries outstripping Bank and official development assistance (ODA) lending. FDI is the largest source of external funding for developing countries.⁴⁰ In 2007 \$379 billion in FDI flowed to developing countries, the largest amount ever.⁴¹ Private sector lending is triple that of ODA and the WBG is a major player in developing countries' rapidly expanding private sectors through its co-financing and guarantees.⁴²

The IFC is now the largest source of multilateral loan and equity financing for private sector projects and it continues to record growth.⁴³ The IFC, like the Bank before it, became embroiled in environmental debates over loans and guarantees. It operates separately although it has overlapping member states with similar power structures. It has a different function but espouses the same development norms of economic growth and poverty alleviation as the Bank. As with the World Bank, the IFC became the focus of a TEAN project campaign, the controversial Panguingue dam in Chile. TEANs used persuasion, social influence, and coercion via direct and indirect socialization to oppose the project. Continuing these processes, TEANs then pushed for the IFC to have its own environmental and social safeguard policies and information disclosure, which it did in the 1990s. Finally, like the World Bank, TEANs used persuasion, social influence, and coercion to push for an accountability mechanism to lock these changes into place. In response, in 1999 the IFC established the Office of the Compliance Advisor/Ombudsman.

The third affiliate, MIGA, has also grown covering \$2.1 billion in political risk insurance to international private lenders in 2008, with an overall portfolio of \$6.5 billion guarantees. MIGA facilitates four dollars of FDI for every dollar guaranteed, and it is a central player in the international political risk insurance industry.⁴⁴ MIGA became the focus of TEAN criticism over its role in underwriting private sector capital invested in development projects where there was a negative environmental impact. TEANs attempted to influence MIGA again using persuasion, social influence, and coercion through a project campaign, this time on the Freeport mine in West Papua. TEANs then used these micro-processes directly and indirectly to ensure that MIGA would have its own environmental and social safeguard and information disclosure policies. Finally, TEANs also pressured for MIGA to have an accountability mechanism with the IFC to ensure that private sector guarantors had the same oversight mechanisms as the rest of the WBG. The Compliance Advisor/Ombudsman covers both IFC and MIGA operations.

Heated exchanges with TEANs demonstrate how MIGA initially rejected TEAN claims, to engaging with them, to then recognizing the challenges of grappling with its (sustainable)

⁴⁰ World Bank 2006.

⁴¹ UNCTAD 2007, xv.

⁴² OECD 2007.

⁴³ IFC 2007.

⁴⁴ MIGA 2008, 3, 8.

development mandate and its political risk insurer identity.⁴⁵ However, environmental protection mechanisms in this agency have been less fully implemented than in the other two World Bank entities discussed earlier. MIGA “does not have a strategy or business line to actively promote free-standing environmentally beneficial guarantee projects” and has “only recently begun to move towards environmental stewardship.”⁴⁶

How WBG Identities Influenced the Take-up of Sustainable Development

The World Bank, the IFC, and MIGA all have development mandates but their separate identities made their interpretations of development priorities different. All initially resisted but then were influenced by sustainable development norms to some degree. Each has a mandate and a bureaucratic culture based on its dominant profession which influences how it functions. This culture is informed by how the agency perceives itself and is perceived by others. The World Bank is primarily an economists’ bank with a development mandate to provide knowledge and leadership on how to lend ODA. The IFC on the other hand comprises international financiers who aim to facilitate private sector investments and loans within developing countries. Lastly MIGA is made up of political risk analysts who underwrite FDI for projects in developing countries. Each perceives, and is perceived differently by their member states, the private sector and by TEANs because they have different ways of seeing the world, based on their dominant collective professional view about how to undertake their operations.

The WBG organizations have implemented environmental norms differently, according to their respective mandates, professional base, organizational cultures, and perceptions. This identity is partly established by states that set the mandate, scope, and function of the organization. This identity, defined as an organization’s mandate and bureaucratic culture, is both subjective and intersubjective. Thus, an IO has a mandate and a bureaucratic culture based on its dominant profession which influences how it undertakes its functions, but is also informed by how it perceives itself and is perceived by others. The intersubjective aspects of identity are essential in determining whether there has been an identity shift in an IO, rather than merely a policy shift informed by instrumentalist decision-making.

The World Bank was at the forefront of creating environmental and social standards for sustainable development and was recognized as such by TEANs. The IFC now markets itself to project sponsors on the positive financial, social, and environmental benefits of sustainable development. The IFC argues that is at the forefront of sustainable finance and client surveys demonstrate that the market is responding. MIGA argues that it is at the “top of its peer group” for political risk insurers in its environmental and social requirements, although TEANs do not think that MIGA takes environmental and social standards seriously.⁴⁷ A constructivist framework furthers the analysis of change by mapping the process, and by establishing that change is in fact much deeper than rationalist scholars of IOs acknowledge.⁴⁸

Greening Development Finance: A Work in Progress

Arguing that the WBG agencies’ identities have shifted as a result of internalizing sustainable development does not mean that WBG–TEAN interactions have concluded. Dialogue is part

⁴⁵ MIGA 2000.

⁴⁶ World Bank 2008, 64.

⁴⁷ MIGA 2008, 4, 9.

⁴⁸ Nielson et al. 2006.

of an uneven process of change, characterized by intermittent conflict and cooperation. The WBG and TEANs both aspire to further development, albeit in different ways, and continue to interact, producing and reproducing WBG identities and norms of development. The shifts in identity by the Bank and the IFC (less so MIGA) have not been easy, complete, or permanent. Most actors and activists, when pressed, would recognize that these institutions have changed markedly since the beginning of TEAN engagement. These institutions have demonstrated changes in their policies, institutions, and practices.

Of course there remain difficulties in operationalizing sustainable development. Despite increasing the amount of financing for environmental stand-alone projects or components for projects, increasing environmental staff and training, and environmental oversight in project lending, the Bank, the IFC, and MIGA all continue to engage in sectors known for their high environmental and social impact. The Bank has returned to sectors such as high dams and logging, while continuing to engage in oil, gas, and mining. The IFC knowingly engages in high-risk, potentially highly environmentally and socially damaging projects on the basis that it can contribute the most to development in doing so. Although the majority of MIGA's portfolio remains finance based, it continues to attract environmental claims against underwriting mining operations.

Sustainable development now means going beyond "do no harm" toward "doing good" and going "beyond compliance" but it is still predicated on large-scale development. For the WBG, furthering sustainable development still means engaging in development activities that borrower states and corporations want funded. It means they attempt to mitigate and offset the environmental effects of these projects, but it does not mean that they will stop lending, investing, or underwriting development projects.

Sustainable development is therefore determined by shared agreement over what is acceptable practice for development institutions. Most states, most IOs, and even many NGOs in TEANs accept that this is still based on modernization and industrialization. In this respect, the very idea of sustainable development accords with what Steven Bernstein has called the "compromise of liberal environmentalism" where environmental mitigation measures have been wedded to capitalist economic development.⁴⁹ Others rail against this form of "green neoliberalism,"⁵⁰ although this fails to adequately appreciate the extent to which the Bank, the IFC, and perhaps now even MIGA are changing to accord sustainability a role in their decision-making and operations.

That environmental ideas have been reconciled with economic concerns in this way does not mean that the WBG has solved how this works in practice. Their operations and activities continue to evolve but weaknesses remain. For some this constitutes IO "hypocrisy"⁵¹ where IOs attempt to reconcile the competing member states' demands but remain impeded by their own organizational culture. The World Bank, for example, often does not meet its own standards for sustainability as demonstrated in Independent Evaluation Group and Quality Assurance Group evaluations, while the IFC posts consistently lower environmental, social, health, and safety results. Critics call for independent evaluators to ensure development organizations remain accountable. Indeed, this would go some way to ensuring greater environmental and social transparency, effectiveness, and accountability.⁵²

⁴⁹ Bernstein 2001.

⁵⁰ Goldman 2005.

⁵¹ Weaver 2008.

⁵² Birdsall 2006; and Woods 2006.

Nonetheless, the changes are not merely a result of top-down change from member states. The WBG continues to devise new ways to track, monitor, and evaluate its efforts. The Bank continues to experiment with alternative means of incorporating sustainability holistically through sectoral and country environmental analyses. The IFC has devised new means of tracking development impacts for projects in real time. MIGA has announced that it will provide information for highly sensitive development projects. There is more that each of these organizations can do and the process of internalizing externally driven norms is not easy, fluid, or continuous. Yet we can point to WBG practices, resulting from interactions with TEANs and states, as evidence of identity shifts in these agencies and the reconstitution of international sustainable development norms.

Market-based Sustainability Wins the Day

Identity shifts have taken place in the World Bank and the IFC, and there have been more recent changes in MIGA as a result of the TEAN socialization. The Bank introduced a rules-based sustainable development for ODA. However, the interpretation of environmental priorities by the IFC and MIGA are increasingly influential owing to the dramatic rise in FDI. The IFC now has considerable normative sway in terms of international sustainable development through devising the Equator Principles (environmental standards for private banks) and having its performance standards recognized in the OECD's common approaches for export credit agencies and MIGA.

In some ways, the rise of private capital is even influencing the World Bank. The Bank has initiated the reconstitution of its rules-based sustainable development as it tries to compete with FDI. This has led the organization to reinterpret sustainable development through the use of a country systems approach, where borrower states' national standards (that are "equivalent" to the Bank's safeguards) are used. While TEANs hoped to ensure that all investors and political risk insurers met the *World Bank's* rules, all investors and political risk insurers are now following *IFC's* market-based standards.⁵³

While improvements in development financing and even political risk insurance are demonstrable, these are not enough to prevent environmental degradation. Greening these IOs have altered industry practices to take account of environmental concerns but they have not reshaped the market in which these industries operate. These organizations are contract-based financiers and insurers of development; they do not protect communities and ecosystems under threat during financial downturns or when individual project sponsors decide to prepay loans or cancel political risk coverage. The behavioral responses of these organizations to such market events limit their ability to ensure sustainability. Without internalizing environmental costs into the global political economy, they cannot ensure sustainability. Until there are ecological economists, ecological financiers, and ecological political risk analysts, sustainable development will remain driven by TEAN and member state interactions with the WBG agencies. While greening these IOs is a move in the right direction, much broader shifts within all market actors and industries need to occur.

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⁵³ Hunter 2008.

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29 Moving the earth: cars and the dynamics of environmental politics

*Matthew Paterson*¹

When Western academics, especially in the discipline of politics, think about environmental politics, they tend to start with the environmental issues through which we come to understand the physical world around us as in some sense or other “endangered” and thus “the environment” becomes something of political interest. So we analyze climate change, toxic waste, species extinction, genetic modification, and so on. We look at the processes through which such issues are defined, articulated politically, the different institutions which come to deal with them, and attempt to explain how such institutions respond to such problems, often with a sense of purpose about how they might respond “better.” At times we look across issues at similarities in the way they are treated, such as the roles of different actors (business, environmental nongovernmental organizations, international organizations) in shaping such responses, or at specific political discourses (environmental security, liberalism, ecological modernization) through which such responses are understood.

What happens when we do this of course is that the environmental issues themselves tend to be both reified and treated uncritically, and at the same time any sense of an overarching “environmental crisis” is lost or at least attenuated, as the world is split up into a host of seemingly discrete “issues.” The interconnections between different such issues, such as the knock-on effects of particular ways of dealing with one on another, get missed.²

I do not propose that we should discontinue studying such issues and responses to them, but rather that we *also* need to take a general look at the politics of the many material practices that generate environmental degradation. This enables a more systemic analysis by looking at how the practices that generate degradation are bound up with the operations of modern political, social, and economic systems. It avoids the tendency to privilege technofixes, which is one outcome of the “issues” focus (as such a focus means we tend not to look at the knock-on consequences across such issues). Perhaps most fundamentally, it enables us to answer the question of why environmental degradation occurs, not only how political institutions respond to them.

Many such practices could be chosen to develop this way of thinking about environmental politics. We could look (for example) at construction, at computers, at food, at telecommunications, at housework, at education, at aviation, at the military, at paper, at electricity, at keeping warm and cool. In each case we should avoid reducing it to a focus on business practices (hence the above list does not start “the construction industry”), which tends to oversimplify the situation and its politics by enabling us to point the finger at corporations too easily.³

¹ This chapter draws on earlier work on the themes developed here, where fuller versions of some of the arguments can be found. See in particular Paterson 2007.

² The tall stacks means of dealing with local air pollution on acid rain is the most well known, but myriads of other examples can be found – the legacy of the treatment of hydrochlorofluorocarbons (HCFCs) in the Montreal Protocol for the climate change regime is another good example.

³ In the present context, Peter Dauvergne arguably falls into this problem when he focuses on the politics of lead in gasoline in his chapter on cars in *The Shadows of Consumption* (2008).

For me, cars are particularly good example. They certainly count as what Julian Saurin calls a “globalised reiterated practice,”⁴ an omnipresent feature of modern life across the planet (even if very differentially so), which are associated with generating many aspects of environmental degradation. These impacts range from local air pollution with its widespread health impacts, to regional and global air pollution impacts (acid rain, climate change), to intensive resource use and depletion, to the impacts of oil extraction (principally to power cars), and many others.⁵ So cars and mass car use (700 million and counting)⁶ are clearly important in terms of the generation of environmental degradation.

But they are also important politically, and thus useful for examining the depth of the political challenges thrown up by environmental change. First, they are integral to the organization and reproduction of the global economy. They are associated with some of the biggest corporations in the world, one of the most globally integrated manufacturing industries, facts which help us therefore to focus on the structural power of business. They are frequently associated strongly with high levels of economic growth during the twentieth century, and as a consequence have been promoted by states over rival forms of transport. Second, they are highly culturally valorized. They themselves are fetishized as highly desirable commodities around which status competition and identity formation are often mobilized. But they also are seen to embody many of the symbols through which modernity is itself understood as “good.” Thus the practices of accumulation are deeply embedded in individual and collective identities. Third, they can widen the focus usefully, avoiding looking simply at an industry, but at a whole social complex of production, consumption, regulation, and so on, that we could call a regime of “automobility.”⁷ Finally, cars and their associated practices of road building and oil extraction and shipping, have been in many places an object of resistance, and thus help focus on the contested nature of global environmental politics (GEP) – to see it not just as a technical attempt to find an optimal solution to particular problems, but as a fundamental contest over values, worldviews, interests, and authority.

International Political Economies of Cars and the Environment

An appropriate place to start examining the global environmental politics of cars is perhaps with international political economy (IPE). Realist and liberal IPE indeed contain a good deal of writing on the car industry. Most of this work focuses on the location of manufacturing plants, revealing the frame’s nationalist orientation – the question for such writers is normally “how can [insert country X] best pursue the benefits of having car manufacturers locate on their soil?”⁸ A subfocus here is on regional integration schemes which often generate specific contexts for such interstate competition for locational advantage and also as knock-on consequences rules, mostly involving harmonization of standards, designed to level competitive playing fields.⁹ In this context, the environmental features of such integration schemes are prominent and are often where environment/economy conflicts become prominent, often specifically regarding cars.¹⁰ This lens can be useful, especially in the latter context, in terms

⁴ Saurin 1996.

⁵ On the environmental impacts of cars, see, for example, Transnet 1990; and IEA 1993.

⁶ Shove 1998.

⁷ Rajan 1996; Shove 1998; Urry 2004; Böhm et al. 2006; and Paterson 2007.

⁸ For example, see Molot 1993; and Kawahara 1997.

⁹ Most work here is on NAFTA (North American Free Trade Agreement) and the EU. See Weintraub and Sands 1998; and Freyssen et al. 2003.

¹⁰ Arp 1993; and Kirton 1998.

of how it enables us to focus on corporate lobbying over environmental questions. But this remains a fairly limited lens for environmental purposes. Specifically, as it asks a question about the locational politics of car manufacturing it both misses the broader ecologically important question of why all states favor cars over their rival transport modes, and narrows the focus to the car industry, rather than focusing on automobility in all of its complexities.

A broader IPE rooted in political economy more generally, which comes usually (although not necessarily) out of Marxian traditions, can take us significantly further in understanding the environmental politics of cars. Such frameworks generate three highly salient foci. First, they focus on the overall material organization of the economy. The debates about Fordism and beyond show the importance of the car industry and of car consumption to the organization of the global capitalist economy.¹¹

Second, and following from the former, many studies illustrate the important relationship between cars and growth. Car industries have been at the forefront in innovation in production techniques and labor organization from Ford's assembly line onwards, which have generated high levels of growth. But the connection is deeper than this. Car industries are widely recognized to have particularly high levels of, and complex forms of, forward and backward linkages. From oil extraction and metals production, to parts manufacture, to assembly, to distribution and sales, to insurance, to maintenance, and so on, investment in the car industry has particularly widespread impacts across the economy.¹² Furthermore, cars in their consumption increased the mobility and flexibility of the circulation of goods and thus made a whole range of other producer and consumer practices possible, accelerating overall accumulation in the process.

Third, such lenses start with the proposition that in capitalist societies, there is a structural imperative for growth and for states to promote growth. In capitalist society, recession (lack of growth) is the definition of economic crisis. The imperative for capitalist firms to aim to maximize profits has the expansion of the system as a whole as a systemic imperative. But capitalist societies are also unstable, as a result of class conflicts and the contradictions between the interests of individual capitals and capital collectively in particular.¹³ This thus generates a systemic explanation of the favoring of cars over their competitor transport modes, and thus of the overall ecological consequences of the transport system. This helps us understand how the dynamics of environmental degradation are rooted in specific patterns of accumulation and in the imperative of accumulation in general.

Cars, Cultural Politics, and Environmental Politics

But this sort of political economy is also limited in explaining the dynamics underlying the regime of automobility. Specifically, it misses the cultural dynamics of cars, or rather has a crude explanation of such cultural politics. Within this frame, the cultural attachment to cars is regarded as simply the ideological extension of the political economy of the car. In order to promote accumulation via accelerating mobility and consumption, corporate and state elites have developed ideological images of cars as representatives of freedom. The car thus becomes an ideological mask to obscure the unfreedom in labor relations. As Gorz neatly puts it, the car is the "expression of bourgeois ideology at the level of everyday life," with its associations of individualism, consumption, status consumption, and exclusion.¹⁴

¹¹ Lipietz 1985; Amin 1994; and Rupert 1995.

¹² Overy 1990.

¹³ Jessop 1990.

¹⁴ Gorz 1980. See also Gartman 1994; or Wolf 1996.

But the promotion of cars in these ways cannot be reduced to this accumulation imperative. Central to automobility is the production of the “automobile subject” – the individual who values the things cars enable and whose valuing of these things is reproduced by the growth of automobility itself. These all of course intersect with accumulation imperatives, but cannot be reduced to them.

Perhaps the most fundamental of these is the specific combination of particular conceptions of freedom and the valorization of movement in modern societies. These of course come together in the term “automobility” such that cars not only symbolize such values, they almost by definition come to be seen as the condition of possibility of the realization of such values. Thus an “automobilist,” a common early twentieth-century term for car driver (Toad of Toad Hall is an “automobilist” in the well-known early anti-car novel *The Wind in the Willows*) is precisely someone who is specifically *autonomously mobile*.

Cars are thus widely understood in normative terms through their ability to enable people to realize these values. At the level of discourses of everyday life, one of the most widely referred to advantages of cars is their ability to get one from A to B by a route of the driver’s choosing, at a time of their choosing, and so on, by contrast with the schedules and fixed stops of most public transport systems. Freedom is ubiquitous in car advertising, the connection made through images of the open road, where the freedom is expressed and understood to be specifically connected to the possibilities of unconstrained movement. And, of course, “freedom of movement” is one of the standard elements in both Anglo-American liberal thought and in French Revolution-derived traditions regarding the meanings of liberty.

The conception of freedom here is essentially libertarian (as opposed to liberal). It is, as car critic James Howard Kunstler has stated, the “freedom of the fourteen-year-old child,”¹⁵ the freedom which recognizes no responsibility to those around, no sense of having to consciously decide on a course of action, simply of being able to act on temporary whims without external constraint. It hypervalues individuals and has no conception, as do liberal conceptions of freedom proper, of the boundaries of freedom created by the obligation not to impinge on someone else’s freedom.

But it is the way it is connected to movement which is particularly interesting and important politically. Freedom of movement was a rallying cry in the French Revolution, as the *ancien régime* had radically restricted movement to control populations. However, the “freedom of movement” attained early on in the French Revolution, quickly became the “dictatorship of movement.”¹⁶ Mobility, then, became “simultaneously the *means to liberation* and the *means to domination*.”¹⁷ At the end of the nineteenth century and into the early twentieth century, mobility was frequently experienced and articulated as increasingly dominating; cars were discursively presented as providing a means of recreating the potential for liberation. This is both in the civilian contexts of emerging commuter cultures oriented around trains and trams, and in the military context of the problem of train-led timetables in the origins of World War I.¹⁸

This tension is still present. On the one hand, modern societies legitimize themselves in terms of values such as freedom, mobility, equality, democracy, and so on. On the other, modern societies *require* people to be increasingly mobile and flexible to act as modern subjects in the

¹⁵ Kunstler 1996, 60–61.

¹⁶ Virilio 1986, 30.

¹⁷ Douglas 1999, 147. Original emphasis.

¹⁸ Taylor 1969.

workplace, the army, the home, the shopping mall. People are exhorted to move constantly to find work, as part of their work, to seek out new sites of consumption, to travel to new places on holiday, and so on. But at the same time, given the socio-ecological consequences of modern forms of movement, in particular automobility and air travel, such movement is increasingly regulated. The pathologies of automobile use, in terms of danger to car drivers and others who may get in their way, of pollution, of urban spatial reorganization, and most banally (but at a day-to-day level most importantly) of congestion, mean that car use becomes increasingly regulated. There were riots when city governments put in place the first parking restrictions and traffic lights, and drivers often see each new technological development as a new intrusion on their freedom. Recently, there have been illegal campaigns to destroy speed cameras in the UK, for example, and the planned introduction of compulsory GPS systems is similarly regarded with hostility in many quarters. But the vision of unconstrained mobility lives on despite the increasingly intrusive regulation. As Rajan points out in his discussion of the regulation of cars regarding air pollution in California, it is precisely the uncontested attachment to automobiles which renders such regulation necessary to offset the side-effects of mass automobile use.¹⁹

Automobility's Contradictions

Focusing on the political economy and cultural politics of the car gives us a powerful explanation of how, politically, global environmental degradation has come about. It suggests that many of the daily practices which collectively engender such degradation are systemically bound up with the reproduction of capitalist society, with its requirements for accumulation, and at the same time are integral to many of the symbols and identities through which modern societies understand themselves and are reproduced culturally. But at the same time the danger is of course that this gives too much of a sense of closure, and that there is no alternative to the current mode of automobility with all of its ecological consequences. But of course automobility contains many contradictions, and has also been widely resisted since its inception.

One way to think about these contradictions is to think about projects to “green the car.” There are various technical possibilities here. The fuel sources can be changed to being environmentally benign, the fuel efficiencies can be increased dramatically, safety measures can be significantly enhanced, “smart” cars and traffic systems can be introduced to mitigate congestion, and so on.²⁰ For most observers, the technologies already exist to transform the automobile system in these ways, and all that is required is their aggressive adoption through state policies designed to shape corporate and individual practices. In this sense, automobility can be thought of in systems-theoretic terms, where it grows as an autopoietic system, but which contains dynamics which eventually lead to the development of different systems or significant modifications of the system itself.²¹

But this systems-theoretic account is highly problematic.²² In particular, in presenting automobility as autopoietic it obscures the sites of human agency where the regime of automobility was set in train, and through which it might be transformed or overcome. There is thus no politics except perhaps an elitist, technocratic one, in the systems account. Normatively it tends to lead to the sort of focus on technical fixes which are advocated by

¹⁹ Rajan 1996.

²⁰ On ecological modernization and cars, see Paterson 2007, ch. 7.

²¹ Urry 2004.

²² Böhm et al. 2006; and Paterson 2007.

ecological modernization approaches to cars and environmental policy in general, even if the technical fixes are understood in terms of their nonlinear transformative effects rather than as incremental gains. A significantly more critical eye should be cast over the potential of such technofixes than those cast by boosters such as Amory Lovins.²³ In narrow environmental terms, there is the danger that the successor technologies to the internal combustion engine have more significant implications than often assumed. For example, with fuel cells, one of the possible long-term successors to the internal combustion engine, the question remains as to where the electricity comes from to create the hydrogen from water, and it requires enormous optimism about the take-up of renewables to assume the electricity for such purposes can all be generated from such sources.

More importantly, such a strategy misses the internal contradictions associated with automobility itself. Identifying these contradictions is key to being able to imagine how political space might be opened up for the pursuit of sustainable transport systems. A number of such contradictions can be identified. First is that between autonomy as the car's cultural imperative and the progressive intrusion on the "freedom" of the driver as society seeks to deal with the car's various problematic side-effects. For example one strategy to deal with congestion is the introduction of telematics, or "smart" motoring – the development of onboard communications systems to inform drivers about sites of congestion, alternative routes, and ultimately leading to the development of automated driving systems, so that the driver (on "smart" roads at least) does nothing other than tell the car where s/he wants to go, and the car, interacting with the road, does the driving.²⁴ This is of course frequently talked about in terms which suggest that the driver could now concentrate on other ways of being mobile. They are now enabled to use their phones, their computers, and the internet. This is in many ways an extension of the transport technology in the car itself, where technological development has been focused on reducing human movement and effort (from hand cranked starters to electric automated doors), while maximizing physical movement of the car – a progressive virtualization of human movement consistent with new telecommunications technologies. Of course, what this does at the same time is attenuate the sense in which the driver is "autonomously" moving – their autonomy becomes more and more reduced to a sense of a decision in their brain about where and when to go, and less and less about "mastery" of the car as a machine. Thus the technocratic impulses of ecological modernization and the "smart car, smart highway" developments, run-up against the cultural imperatives of cars as embodiments of freedom.

Automobility should thus be conceived of as containing fundamental contradictions which cannot be overcome within a cultural and political-economic framework emphasizing the conflation of autonomy with mobility. The most immediate one here is the sense in which the insistence on car-based mobility increasingly hits the limits to do with the presence of other cars on the road and of road construction. Thus to maintain movement in scarce urban (and inter-urban) spaces, autonomy has to be sacrificed through telematics and automated driving. Similarly, in Rajan's example, to keep the air tolerably breathable, while keeping car use unconstrained, requires a progressively more intrusive set of regulations, on car manufacturers, on firms maintaining cars, on owners of cars regarding maintenance and inspection of cars, and so on.²⁵

²³ Hawken et al. 1999.

²⁴ Sheller and Urry 2000.

²⁵ Rajan 1996.

But there is a second, perhaps more deep sense in which automobility is internally contradictory. This is in the way that what is presented discursively as autonomous, is in fact never so. Böhm et al. refer to this as the “impossibility of automobility.”²⁶ Akin to feminist arguments about the obscured dependencies of “rational economic man” – on women’s labor, and often on “nature”²⁷ – the presentation of car driving as autonomous obscures the dependence on, among other things: displacement of a range of environmental costs (climate change, forests, acid rain, and so on); military spending to secure access to oil; state expenditure for infrastructure development; healthcare costs from accidents, air pollution related ill-health, and disease because of lack of exercise; and legal and policing arrangements to ensure the smooth running of the system. All of these are required to occur in order that the driver can be presented as “autonomously moving.”

The immediate point perhaps in terms of environmental politics is that many of these dependencies are ones which are creating strains which cannot be sustained. Students of environmental politics will be familiar with these, and they need little expanding on here. But the more important point in the context of this chapter is that to understand the politics of the immediate problems of sustainability embedded in automobility, we need to understand the deeper internal dynamics of tensions within automobility. For it is these which will determine the possibilities of either mitigating its effects or transforming it as a system.

A third sort of contradiction, however, leads us in a different sort of direction. This is to do with the contemporary place of the automobile in the global economy. While it is the case that for much of the twentieth century, the industry was the “engine” of growth, it is no longer clear that it is so, and suffers from a number of structural weaknesses. Since the early 1970s, the industry has been in a persistent situation of overproduction and overcapacity, meaning that the profitability of many of the major firms has been recurrently in crisis. Many companies have had to be bailed out periodically, and there has been massive consolidation in the sector through mergers, buyouts and the like.

The current situation is exemplified by the way that car manufacturers were affected by the financial crisis of 2007 onwards, especially in the United States. While this was a crisis first and foremost between the housing and the financial sector, it quickly became a generalized economic crisis. As a car constitutes the single biggest household purchase after a house, and as sources of finance dried up as financial institutions themselves retrenched their lending, car sales slowed quickly as consumers either became significantly more cautious, or could not find sources of financing. Rapidly, the big three US manufacturers tipped into crisis. GM and Chrysler went bankrupt, GM’s bankruptcy being the largest company ever to do so. Both companies were bailed out, collectively to the tune of US\$81 billion, with bailouts for subsidiaries in other countries also forthcoming (Can\$13 billion for example, in Canada). Other companies both in the US and elsewhere similarly faced acute difficulties at the height of the economic crisis.

These structural weaknesses arguably harmed the image of the industry as a whole. But my point here is that the unfolding of this basic contradiction – persistent overcapacity, reproduced by international competition and state support for the industry – also opened up some political space for potential transformations. Two elements are worth mentioning here. First is that the bailouts came at the cost, for the industry, of significant reductions in capacity. At Chrysler and GM in particular, whole production lines were eliminated, and factories closed down. While

²⁶ Böhm et al. 2006.

²⁷ Pateman 1988; and Plumwood 1993.

this has had significant costs for workers laid off, it also undermines the capacity of the automobile sector to present itself as the central engine of economic growth. Second, many political leaders (more than many in the environmental movement might have expected) used the power gained through the bailouts to impose environmental improvements on the car manufacturers in ways that might not have been possible outside a crisis situation, and to direct investment increasingly towards alternatives to the car. President Barack Obama, for example, used the situation to impose 30 percent improvements in the Corporate Average Fuel Economy (CAFÉ) standards, while many elements in the stimulus package entailed switches in investment and subsidies both toward non-petroleum based technologies for cars, and from the car sector to alternative transport modes. The *Financial Times* surveyed the various economic stimulus packages, concluding that many had many more “green” elements in them, notably in terms of increased investment in public transport.²⁸

The point here is not that this means the dominance of automobility is over. Far from it. It is more simply to point that it has various contradictory qualities which at times, especially times of crisis, open up space for alternative visions and practices. To understand the nature of how this space might be exploited, we also need to look to the ways that automobility has been resisted over the years.

Resistance to the Earth Movers

Cars, and the regime of automobility of which they are the principal artifacts, are resisted in a way that is often overlooked in the taken-for-granted character of cars in contemporary life. Such resistances are varied in form, and vary in different culturally specific settings, but are nevertheless widespread. They take the forms of, for example: populist tracts against car-dominated societies;²⁹ a range of alternative transport and urban policy practices promoting public transport, traffic calming, “safe routes to school,” “street reclaiming,” and so on;³⁰ direct action against road building, to “Reclaim the Streets” for non-transport uses such as parties and community events, to promote cycling (through Critical Mass actions), to occasional destructive actions such as the torching of Hummers at a sales lot in California;³¹ to counter-cultural actions such as those associated with *Adbusters*; to specific anti-car activities such as the current moral panics around SUVs (sport utility vehicles).

My point here is not to assess the impacts of these resistances. It is perhaps to suggest that they are more widespread than we often think, and that the objections of activists to many of the consequences of automobility have resonances for large numbers of people beyond activist communities (the recent widespread scorn for SUVs is a good, if superficial, example of this). But the more important point for the present purposes is that such resistances *tend* toward the systemic and the cultural.³² They tend toward articulating “the problem” as one which is

²⁸ Steve Bernard, Shyamantha Asokan, Helen Warrell and Jeremy Lemer, “Which country has the greenest bail-out?,” *Financial Times*, 2 March 2009. Available at <http://www.ft.com/cms/s/0/cc207678-0738-11de-9294-000077b07658.html#axzz1M576mQ63>, accessed 12 May 2011.

²⁹ For a small selection, see Flink 1972; Gorz 1980; Sachs 1992; Freund and Martin 1993; Zielinski and Laird 1995; and Kunstler 1996.

³⁰ Engwicht 1999; and Newman and Kenworthy 1999.

³¹ Wall 1999; Seel et al. 2000; and, on the torching of Hummers, Madigan 2003.

³² I should emphasize the word “tend” here. Clearly, not all of those who articulate an opposition to one or more of the consequences of automobility end up thinking this way. But I would defend the argument that thinking clearly about specific problems, whether concerning climate change, urban health problems, congestion, or any of the other specific car-related problems, tends towards thinking in such systemic and cultural terms.

simultaneously about the political economy of accumulation, and about the ideological privileging of a libertarian conception of autonomy, mobility, and the way these two conceptions are conjoined in automobile ideology. Thus many of the resistances end up specifically rejecting individualist ideologies in favor of community-based politics, in different ways,³³ rejecting speed and movement in favor of “slowness”³⁴ or alternative uses of public space,³⁵ and rejecting the imperative of accumulation embedded in capitalist societies.³⁶ The trajectory of RTS (Reclaim the Streets) as an “organization” is the archetypal journey here. RTS actions started as part of the anti-road building movement in the UK in the early 1990s, in the specifically urban context of the M11 link road construction in north-east London. They moved from an opposition to road building (principally because of the destruction of urban communities, unlike the countryside/wildlife/amenity/heritage focus of many other such protests), to an opposition to the dominance of car culture in cities (through organizing parties in city streets which involved illegally closing streets down, to provide an image of alternative forms of urban life), to identifying cars as a symptom of a wider malaise in capitalist society, to organizing anti-capitalist protests (the first large anti-multilateral economic organization direct action being the “Reclaim the Summit” at the G7 in Birmingham in 1998). Such a trajectory follows a logic of thinking through carefully the implications of problematizing cars because of their environmental and social consequences.

Conclusions

This chapter has given a necessarily brief overview of some arguments for how we might think critically about GEP. We can still of course engage with fairly “conventional” debates – for example, one extension of the work here could be to explore the political power of car manufacturers in, say, the climate change regime.³⁷ But this should also be accompanied by a political-economic and a cultural analysis of the conditions of possibility of such corporate power. One of the key advertising campaigns in the US, in the run-up to Kyoto, for example, was that by the corporate-funded National Consumers Council, with the well-known advert with the “soccer mom” complaining about Kyoto that “the government wants to take away my SUV.”³⁸ The embeddedness of such corporate power in specific forms of everyday life, the meanings of motherhood and family responsibility, and so on, should not be underestimated, if we are serious that the purpose of studying GEP is to think carefully about the conditions of possibility of moving toward sustainability. But on the other hand, nor should the fractures and contradictions within dominant social structures, like automobility, which produce periodic crises that open up space for critical social movements to push for radical change.

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³³ For a sense of the variety, see Gorz 1980; Kunstler 1996; RTS No Date; and Engwicht 1999.

³⁴ Sachs 1992.

³⁵ RTS No Date.

³⁶ RTS No Date; Gorz 1980; and Wolf 1996.

³⁷ Levy and Rothenburg 2002.

³⁸ Schneider 2002.

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30 Trade–environment politics: the emerging role of regional trade agreements

Sikina Jinnah

Trade–environment politics is about understanding and managing the impacts of diverging rules and norms in global governance. Despite claims of “win–wins” and more recently “triple–wins,” at their heart the underlying goals of trade liberalization and environmental protection are fundamentally at odds.¹ Trade liberalization is primarily aimed at increasing economic welfare through the opening and expanding of global markets in goods and services. At its core, trade liberalization aims to increase global production and consumption. The underlying assumption is of course that the more we are able to produce, sell, and consume the better will be our quality of life. On the other hand, environmental degradation is *driven* by consumption. Consumption is supported by extraction of the earth’s renewable and non-renewable resources. The more we consume the more we degrade. Although reusing and recycling are important elements in mitigating environmental degradation, it is the third element in the popular tripartite slogan – reducing, particularly in the developed world – that must be grappled with if we aim to effectively address environmental degradation.

Reducing consumption however is not part of the mainstream discourse of international trade liberalization, and ironically is rare even in contemporary discussions of global environmental problem solving. These discussions tend to shy away from the politically intractable issue of “confronting consumption.”² Rather, market- and other incentive-based policy tools (“win–wins” for environment and business) have become the *en vogue* approach to environmental problem solving. For example, emissions trading is central to the Kyoto Protocol’s operation, and the failure to negotiate a binding international treaty on forest governance has yielded policy space to private certification schemes. Neither approach is effectively addressing the environmental problems embodied therein but, due to their political palatability, are broadly accepted as, at a minimum, better than the counterfactual. Similar trends are evident at the domestic level across the globe. In short, what Clapp and Dauvergne have characterized as the “market liberal” worldview to environmental protection has emerged as a widely favored approach to understanding and addressing environmental problems.³

Scholarship surrounding trade–environment politics has largely focused on the World Trade Organization (WTO). This is in part because since its establishment in 1995, the WTO has progressively inserted itself in the *de jure* and *de facto* regulation of environmental issues (for example, GATT (General Agreement on Tariffs and Trade) Article XX, Doha Declaration paragraph 31). The result has been a general dissatisfaction on the part of many environmental activists who have often criticized the WTO for its failure to adequately and/or fairly address environmental issues.

¹ See for example, Dan Esty’s 1994 discussion of the clash of cultures, paradigms and judgments in his classic exploration of the topic.

² Princen et al. 2002.

³ Clapp and Dauvergne 2005.

The two most important strands of this critique have surrounded the GATT and WTO's dispute settlement bodies (DSBs), and the potential for conflict between multilateral environmental agreements (MEAs) and WTO rules.⁴ On the former, some have been critical of the DSBs' interpretation of the GATT's environmental exemptions (GATT Article XX).⁵ These exemptions provide space for the legal protection of a domestic environmental policy that would otherwise violate obligations under the GATT if certain criteria are met. The GATT and WTO DSBs have heard approximately 10 Article XX cases, and have granted an environmental exemption only once.⁶ However, in the well-known *Shrimp–Turtle* case,⁷ the Appellate Body for the first time acknowledged that the US policy met the conditions of Article XX(g) (that is, it relates to the conservation of a natural resource). Nonetheless, the exemption was denied because the US failed to meet the conditions of the chapeau (that is, the policy was applied in a manner that constituted unjustified or arbitrary discrimination).⁸

The second strand of trade–environmental politics scholarship is concerned with potential conflict between MEAs and WTO rules.⁹ This literature has been primarily concerned with two things. First, because the WTO DSB has historically interpreted Article XX quite narrowly, some have expressed concern that the WTO will strike down domestic environmental policies aimed at implementing MEAs. For example, because certain MEAs encourage (or require) countries to use trade restrictive measures as a means to control an environmental problem (for example, the Montreal Protocol restricts the production and use of ozone-depleting substances), some worry that these policies will be challenged and found inconsistent with WTO rules.¹⁰ Second, some scholars have expressed concern that the threat of such conflicts may have a “chilling effect” on global and/or domestic policy-making.¹¹

Although the WTO has certainly played an important role in global environmental affairs, it is not the only trade organization that is impacting environment politics. Rather, in the shadow of a largely eagle-eyed focus on the WTO, another site of political activity has quietly emerged as a potentially *more* important site of trade–environment politics. Perhaps in part due to the stalled Doha round of WTO negotiations, bilateral and regional free trade agreements (FTAs) have proliferated. There are currently over 200 “physical” bilateral trade agreements (BTAs) and/or regional trade agreements (RTAs) in force.¹² These agreements tend to have more detailed provisions than the WTO on non-trade, or “trade-plus” issues, such as labor and

⁴ Other important strands include those on WTO reform and legitimacy. See, for example, Driesen 2001; Howse and Nicolaidis 2001; Weinstein and Charnovitz 2001; Esty 2002; and Guzman 2002.

⁵ See, for example, Gaines 2001.

⁶ The exemption was granted in the case entitled “European Communities – Measures affecting asbestos and asbestos containing products” adopted in 2001.

⁷ Formally known as “United States – Import Prohibition on Certain Shrimp and Shrimp Products” adopted in 1998.

⁸ See DeSombre and Barkin 2002 for more on this issue.

⁹ See, for example, Granadillo 2000; O'Neill and Burns 2005; and Condon 2009.

¹⁰ To date, we have seen very little conflict on this front. The only instance of MEA–WTO conflict occurred in the Biosafety case, in which the Panel noted that member obligations under the Convention on Biological Diversity (CBD) could not be used as justification for deviating from WTO rules because not all parties to the dispute were CBD parties.

¹¹ See, for example, WWF 1999; Conca 2000; and Eckersley 2004.

¹² RTA Database, World Trade Organization. Available at http://www.wto.org/english/tratop_e/region_e/region_e.htm, accessed 21 April 2011. The “physical” distinction indicates a single RTA that addresses both goods and services. Some tallies of RTAs in force count each of these categories separately, despite coverage in a single RTA, and therefore have a higher count. The WTO definition of RTAs includes customs unions, economic integration agreements, FTAs, and partial scope agreements. FTAs and partial scope agreements account for 90 percent of agreements in force, with customs unions constituting the remaining 10 percent.

environmental protection. Indeed, the environmental provisions in some of these agreements are far more prescriptive than parallel provisions contained in any of the WTO agreements. Despite their emerging importance to international environmental politics, these bilateral and regional agreements have largely escaped scrutiny by scholars interested in the connections and overlap between trade and environmental politics.

This chapter turns its focus therefore to examine trade–environment politics through the lens of the regional and bilateral FTAs. I focus specifically on the universe of FTAs negotiated by the United States. The following section overviews the evolution of environmental provisions in US FTAs over time, demonstrating how these provisions have become increasingly progressive and prescriptive over time on environmental grounds.¹³ The subsequent section hones in on the environmental provisions in one specific US BTA, the 2009 US–Peru Trade Promotion Agreement (TPA).¹⁴ This section argues that the US–Peru TPA not only goes dramatically further in prescriptively linking trade and environmental policies, but does so in a way that has very real, and potentially positive, implications for MEA implementation and enforcement.

Evolution of Environmental Provisions in US FTAs

The growing importance of linkages between trade policy and environmental governance is well illustrated by the changing treatment of environmental issues within US FTAs. The US first began to pursue bilateral FTAs in the mid-1980s, signing its first with Israel in 1985. The North American Free Trade Agreement (NAFTA), an RTA, followed in 1994 and became one of the first public instances in the US when civil society raised the potentially damaging effects of increased trade on the environment and led a protest campaign against the agreement on environmental grounds. The role of environmental provisions in US trade agreements has significantly changed since that time. As will be discussed in the subsequent section, the most recent US FTA to enter into force is the US–Peru TPA in 2009. This agreement marks the US entry into an entirely new phase of trade and environment politics. In short, the new approach applied through the US–Peru TPA strengthens the environmental provisions in US FTAs by requiring actionable agendas for improved environmental management with the possibility for non-compliance to result in financial penalty or trade sanctions.

In this section I detail how the formulation of environmental provisions within US FTAs has changed over time and briefly discuss how those changes are indicative of larger shifts in US policy.

Proliferation of FTAs

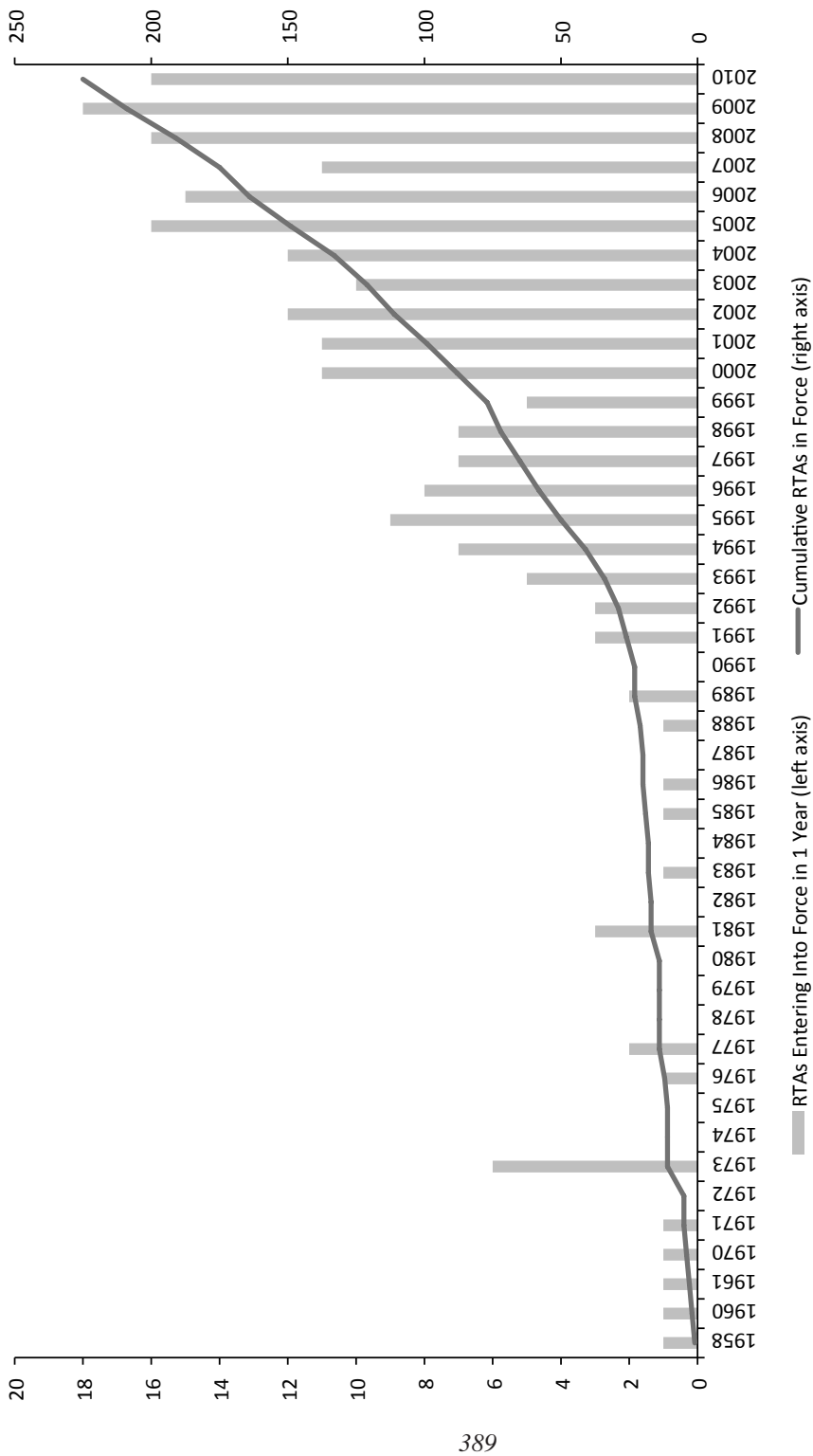
The use of FTAs and RTAs to further regional integration, provide targeted market access and security, and influence multilateral negotiations¹⁵ has grown significantly since the creation of the WTO in 1995. Between its creation in 1948 until its subsumption into the WTO in 1994, the GATT secretariat was notified of 123 RTAs. Since the creation of the WTO in 1995, over 300 agreements have been initiated. More than twice the agreements initiated during the GATT era were initiated post-GATT in a little more than a third of that time (see Figure 30.1).¹⁶ The

¹³ This section draws from Jinnah and Kennedy 2011.

¹⁴ This section draws from Jinnah 2011.

¹⁵ Fiorentino et al. 2006; and Whalley 2008.

¹⁶ World Trade Organization. Regional Trade Agreements: Facts and Figures. Available at http://www.wto.org/english/tratop_e/region_e/regfac_e.htm, accessed 24 March 2011.



Source: World Trade Organization. Regional Trade Agreements: Facts and Figures. Available at http://www.wto.org/english/tratop_e/region_e/regfac_e.htm, accessed 24 March 2011.

Figure 30.1 Proliferation of RTAs, 1958–2010

WTO estimates that, as of July 2010, there were approximately 170 FTAs in force in addition to almost 120 other types of RTAs.¹⁷ The WTO has been officially informed of more than 30 RTAs¹⁸ moving toward entry into force. FTAs are of increasing relevance to global environmental governance because they show that an increase in cross-regional (particularly North–South) agreements is underway, and because they often articulate more complex rules on “WTO-plus” issues such as environmental protection, labor, and intellectual property.

Environmental Provisions in US FTAs

The first US FTA with Israel (1985) did not have any environmental provisions, aside from a restatement of the existing GATT exceptions.¹⁹ GATT Article XX, or the general exceptions clause, provides the possibility for derogation from the trade regime rules if such measures are necessary to protect human, animal, or plant life or health, or relate to the conservation of a natural resource. Although this provision seemingly provides ample space for countries to enact measures they deem necessary for environmental protection, in practice this exemption has only been granted once by GATT and/or WTO DSBs.²⁰ The lack of trade–environment linkages in the US–Israel FTA reflects the state of trade–environment politics at the time. This was prior to the contemporary era of accelerated globalization and prior to the civil society protests against the impact of globalization, including trade liberalization, on environmental and social concerns. Critically, it was also in the early days of the conceptualization of global environmental governance itself, entering into force before the 1992 Earth Summit in Rio and before the Brundtland Commission popularized the concept of sustainable development in 1987. Neither the proliferation of FTAs, nor the acknowledgment of a potentially negative environmental impact from increased trade, was sufficiently established to require specific provisions about environmental concerns in the agreement. This era of trade–environment politics ended with the negotiations over NAFTA.

NAFTA negotiations began in 1991 and the agreement entered into force in 1994. Environment and labor advocates in the US fought hard to include specific language on these issues within the treaty, but had to compromise on a new vehicle for acknowledging the environmental and social concerns tied to increasing trade volumes: side-agreements.²¹ The primary environmental function of NAFTA’s side-agreement is to provide a mechanism through which citizens can play a role in ensuring that their governments enforce existing environmental laws. For example, Article 3 of the side-agreement states: “each Party shall ensure that its laws and regulations provide for high levels of environmental protection and shall strive to continue to improve those laws and regulations.” Later provisions, particularly under Article 6 (Private Access to Remedies), require each party to provide both a mechanism by which affected parties can request investigation of environmental violations, and a mechanism that provides “appropriate access to administrative, quasi-judicial or judicial proceedings for the enforcement

¹⁷ This accounting follows the WTO method of counting agreements based on notification instrument, wherein the goods and services portions of a single agreement are counted as two separate agreements. Other types of agreements include customs unions, economic integration agreements, and partial scope agreements.

¹⁸ World Trade Organization. RTA Summary Tables. Available at rtais.wto.org/UI/publicsummarytable.aspx, accessed 12 November 2009.

¹⁹ Article 7: General and Security Exceptions. United States–Israel Free Trade Agreement. Available at http://tcc.export.gov/Trade_Agreements/All_Trade_Agreements/exp_005439.asp, accessed 1 April 2011.

²⁰ Jinnah 2003; and Clapp and Dauvergne 2005.

²¹ The NAFTA side-agreement, the North American Agreement on Environmental Cooperation (NAAEC), is now administered by the North America Commission for Environmental Cooperation.

of the Party's environmental laws and regulations."²² In subsequent FTAs these elements of the NAFTA side-agreement (non-derogation of environmental laws and public complaint mechanisms) were located within the main body of the agreement. Post-NAFTA side-agreements are now identified as "joint statements on environmental cooperation" and largely function to identify specific areas of cooperation between parties on environmental issues through the development of work programs. While side-agreements opened the door for building relations between environmental policy and trade objectives, they have been criticized as weak and ineffective by many environmental groups, and seen as a lost opportunity by scholarly experts.²³

The next significant development in environmental provisions in US FTAs came in the late 1990s. President Bill Clinton issued Executive Order (EO) 13141 in November 1999, which required that the US Trade Representative conduct environmental reviews of US trade agreements.²⁴ This new policy was first implemented during the drafting of the US–Jordan FTA, which entered into force in 2001. This agreement introduced the use of a specific article related to environmental governance in the main agreement text. In this case, the Environment Article (Article 5) mirrored and extended the provisions of previous side-agreements by not only discouraging parties from weakening environmental laws but also encouraging them to strengthen these laws. Although Article 5 requires each party to strengthen and enforce their environmental regulations, the language is also careful to not infringe on parties' sovereign rights to decide *how* exactly this should be done. Specifically, Article 5 recognizes "the right of each Party to establish its own levels of domestic environmental protection and environmental development policies and priorities, and to adopt or modify accordingly its environmental laws."²⁵ EO 13141 and the US–Jordan FTA were the beginning of the second era of US trade–environment politics, in which recognizing the linkages between trade and environmental governance became accepted practice. Subsequent policy developments, discussed below, further defined how environmental protection and public engagement were incorporated into US FTAs.

A major catalytic force in this evolution occurred with the negotiation and passage of the 2002 Trade Act. The Trade Promotion Authority established under this act allows the President to introduce FTAs to Congress for a vote without the possibility of congressional amendments or filibusters. In return, the President must follow a set of negotiation guidelines outlined in the Trade Act itself.²⁶ The set of guidelines established in the Trade Act of 2002 built from the environmental governance provisions of EO 13141 to require specific negotiating objectives for the administration. In addition to the EO's norms and principles, the guidelines encouraged parties to establish consultative processes in FTAs for strengthening environmental protection, and to continue to consider the relationship between FTAs and MEAs.

²² North American Agreement On Environmental Cooperation, "Part 2: Obligations." Available at <http://www.cec.org/Page.asp?PageID=122&ContentID=2731&SiteNodeID=567>, accessed 14 April 2011.

²³ Charnovitz 1994.

²⁴ Federal Regulation 63, 64, 169, 18 November 1999.

²⁵ Article 5.2, The United States–Jordan Free Trade Area Agreement (2001). Available at http://www.ustr.gov/webfm_send/1041, accessed 12 October 2009.

²⁶ Fast-track authority in trade negotiations was first granted to the executive branch by Congress in the Omnibus Trade Act of 1988. It lapsed during the second Clinton administration because the President and Congress could not agree on negotiation guidelines. It was passed again in 2002 under the title "Trade Promotion Authority." The TPA expired in 2007 and has not been renewed. See: *The Rise and Fall of Fast Track Authority* (<http://www.fasttrackhistory.org/index.html>) and Audley 2003.

Table 30.1 Environment provisions in US FTAs

FTA	Entry into Force	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Israel	1985																						
NAFTA	1994		x	x				x	x	x	x		x		x			x			x		
Jordan	2001	x	x	x	x																x		
Chile	2004	x	x	x	x		x	x	x		x		x					x			x		x
Singapore	2004	x	x	x	x																		
Australia	2005	x	x	x	x																		
Morocco	2006	x	x	x	x																		
CAFTA	2006	x	x	x	x		x																
Bahrain	2006	x	x	x	x																		
Oman	2009	x	x	x	x																		
Peru	2009	x	x	x	x																		
Colombia	NA	x	x	x	x																		
Panama	NA	x	x	x	x																		
Korea	NA	x	x	x	x																		

Note: NA Awaiting congressional approval as of January 2010.

Environmental Provisions Key:

Environment Chapter¹

1. Regulatory sovereignty
2. Continued strengthening of environmental protection
3. Enforcement of domestic environmental laws
4. Environmental laws will not be relaxed to enhance trade
5. Environmental Performance
6. Environmental Affairs Council
7. Public Participation – Procedural Matters
8. Public Participation – Opportunities for Public Participation

9. Public Participation – Submissions on enforcement matters*
10. Environmental consultations
11. Dispute Settlement – Environmental Roster
12. Relationship to other Environmental Agreements*
13. Covered Agreements*
14. Environmental Cooperation Agreement²*
15. Specialized Environmental Article – Biological Diversity*
16. Annex on Forest Sector Governance*

Other Chapters with Specific Environment Provisions

17. Preamble
18. Dispute Settlement – Enforcement Mechanisms*
19. Dispute Settlement – Environmental Expertise*
20. Environmental Exceptions*
21. Investment
22. Corporate Stewardship

¹Does not apply to Israel, Jordan, NAFTA, which do not have Environment Chapters.

²Created in the Environment Chapter.

*MEA related.

Negotiated in tandem with the Trade Act, the Chile and Singapore FTAs (2004) reflect these strengthened environmental process standards. Illustrating the increased attention to trade–environment linkages, these FTAs expanded the US–Jordan FTA’s Environment Article into the first full-scale FTA Environment Chapter. The Chile and Singapore FTAs’ Environment Chapters initiated a variety of new environmental provisions into common practice. These provisions, which are roughly replicated in the Australia (2005), Morocco (2006), Central America Free Trade Agreement (CAFTA) (2006), Bahrain (2006), and Oman (2009) FTAs included: the establishment of an environmental consultation process to resolve disputes related to the Environmental Chapters (all); an Environmental Affairs Council to oversee implementation of the Chapters (Chile and CAFTA); strengthened requirements for public participation (all); rosters of environmental experts to serve as panelists in FTA dispute resolution (Chile and CAFTA); and provisions related to the relationship between the FTA and MEAs (all). Table 30.1 illustrates the progression of environmental provisions in US FTAs from the bare minimum language contained in the Jordan FTA to the increasingly complex and wide-reaching provisions found in the newest FTAs.

The US–Peru TPA contains the most recent innovations in trade–environment linkages in US FTAs. After the Democrats regained control of Congress in 2006 and allowed the TPA to lapse, the Peru, Colombia, and (to a lesser extent) the South Korea and Panama FTAs were renegotiated. These FTAs move beyond general support of environmental protection to include both normative and practical provisions that link FTA compliance to improved environmental management and MEA enforcement.²⁷ These linkages include: a specialized environment article on biodiversity (Peru and Colombia); covered agreements (Peru, Columbia, Panama, and Korea); and, most importantly, an Annex on Forest Governance (Peru) and a stronger linkage between the FTA’s environmental provisions and its dispute settlement process (Peru). The following section presents a detailed analysis of the implications of these new provisions and their implications for global environmental politics writ large.

Case Study of US–Peru TPA

This section focuses on a set of novel environmental provisions contained in the US–Peru TPA, and their potential to impact the effectiveness of treaties seemingly well beyond the scope of the trade agreement itself. The environmental provisions contained in the 2009 US–Peru TPA mark a significant divergence from previous US trade agreements. Whereas earlier agreements tended to firmly respect US trading partners’ sovereign rights to develop and enforce locally appropriate environmental policies, the US–Peru TPA is far more creative and prescriptive, containing far-reaching implications for global environmental politics. Importantly, the environmental provisions within the US–Peru TPA create strong direct and indirect linkages to MEAs, as opposed to focusing primarily on trading partners’ domestic environmental policies.

Overview of MEA-relevant Provisions

US trade agreements have contained MEA-relevant provisions since NAFTA entered into force in 1994. However, under the US–Peru TPA, a new phase of FTA–MEA linkages has emerged, one characterized by far more prescriptive environmental provisions. Specifically, the US–Peru TPA contains three important new MEA-related policy changes related to

²⁷ ICTSD 2007.

provisions on biodiversity, covered agreements, and forest governance. Each is detailed in turn below.

Biodiversity

Much of the US–Peru TPA’s Environment Chapter mirrors those of its predecessors. For example, it requires that trading partners effectively enforce their environmental laws (Article 18.3), encourages public participation (Article 18.7), establishes procedures for citizen submissions on enforcement matters (Article 18.8), and contains a list of “covered agreements” (Article 18.2). However, it also contains a completely new article on biological diversity (Article 18.11). The biological diversity article creates indirect but important linkages to a specific MEA, one which the US is not actually even a party to: the Convention on Biological Diversity (CBD).

The biodiversity article nearly exactly replicates CBD language, some of which was highly controversial in the US, in part explaining why the US never signed the agreement. Specifically, the biodiversity article reinforces norms related to both: conservation and sustainable use of biodiversity, which are generally consistent with US interests; and protecting associated local and indigenous knowledge, which raised crippling intellectual property concerns for powerful US stakeholders during CBD negotiations in the early 1990s. Specifically, the biodiversity article says:

The Parties recognize the importance of the conservation and sustainable use of biological diversity and their role in achieving sustainable development ...

The Parties recognize the importance of respecting and preserving traditional knowledge and practices of indigenous and other communities that contribute to the conservation and sustainable use of biological diversity. (Article 18.11.1 and 18.11.3)

These provisions are further articulated in an “Understanding Regarding Biodiversity and Traditional Knowledge” appended to the agreement as a side letter. Reflecting Peru’s concerns within parallel discussions in other forums such as the World Intellectual Property Organization, the CBD, and the WTO, the side letter recognizes: the potential contribution of traditional knowledge to development; the importance of prior informed consent and equitable benefit sharing; and the need to promote quality patent examination. The side letter also reinforces a key US position in other forums, namely that terms of access and benefit sharing be contractually agreed on the basis of mutually agreed terms between parties.

Although weak on substance, the biodiversity provisions are an important departure from previous trade agreements. It is particularly surprising to see these provisions in a US FTA because the United States is not party to the CBD. Indeed, US government officials involved in negotiating this article noted that many US colleagues were hesitant to include these provisions citing concerns that “the US not effectively ratify the CBD through an FTA.”²⁸ Although these provisions fall far short of establishing specific rules for implementing the CBD, they do create an important link, which lays the foundation for development of similar provisions in the future.

²⁸ Author interview US government representative January 2010.

Covered Agreements

As noted above, the US–Peru FTA contains a list of “covered agreements” similar to that included under NAFTA, and not seen in US trade politics since NAFTA. When the covered agreements clause re-emerged in 2009 under the US–Peru TPA after 15 years of dormancy, it was significantly strengthened in two key ways. First, the new provision expanded the list of covered MEAs from three to seven, including the Convention on International Trade in Endangered Species (CITES). This large expansion of MEAs protected from challenge in the event of trade conflict represents a fairly significant movement in terms of the mainstreaming of environmental norms and values into trade policy and, accordingly, the importance given to such norms and values in the US (and possibly Peru). Second, rather than merely “protecting” these agreements in the event of conflict with a trade agreement, the strengthened clause mandates their implementation. Specifically, Article 18.2 on environmental agreements says that a party “*shall* adopt, maintain, and implement laws, regulations, and all other measures to fulfill its obligations under the multilateral agreements listed in Annex 18.2 (‘covered agreements’)” (italics added). Again, this marks significant movement toward mainstreaming of environmental provisions into US trade policy.

Annex on Forest-sector Governance

Finally, the most far reaching and novel of these new environmental provisions is the US–Peru TPA’s annex on forest-sector governance. The annex not only promotes environmental norms and principles but, critically, establishes prescriptive rules for implementing them. For the first time in US trade politics (possibly global trade politics) the TPA contains numerous provisions dictating *specific* policy changes related to the implementation and enforcement of a *specific* MEA in Peru: CITES. This marks a significant strengthening of environmental provisions in US trade agreements, with the US detailing how a trading partner should implement its domestic environmental policies. Previous agreements left this entirely up to sovereign discretion. Most notably, the TPA mandates environmental policy implementation that has historically been intractable under CITES alone.

The annex contains extensive language related to the Peruvian forest sector, only a small (but important) portion relates directly to Peru’s implementation of obligations under CITES. I focus here only on those provisions related to CITES implementation and enforcement.

On CITES implementation, the annex requires Peru to increase criminal penalties to deter illegal timber trade, conduct population analyses of CITES-listed species, calculate “accurate” conversion factors²⁹ to inform decisions on CITES export quotas,³⁰ adopt a strategic plan of action to implement the CITES Appendix II listing of bigleaf mahogany, establish an annual export quota for bigleaf mahogany, and develop systems to verify the legal origin and chain of custody of CITES-listed tree species. These provisions are extremely prescriptive and mirror CITES requirements that Peru has habitually resisted implementing under CITES dictate alone.

The annex also contains prescriptive provisions on CITES-related enforcement and compliance. For example, the FTA requires Peru to track producers and exporters of timber products to the US, verify their compliance with relevant laws, allow US officials to participate

²⁹ Conversion factors are used to convert specimens (for example, sawnwood) into number of individual trees, and have been highly contentious in CITES negotiations because some see them as a way to obscure actual species take.

³⁰ Under CITES, range states must publish export quotas for Appendix II listed species, which should be based on scientific evidence confirming that a quota does not threaten the survival of the species.

in those verifications, and provide verification of such information to the US on request. If Peru fails to verify this information, the US may take “any other such actions with respect to the exporter’s timber products that it considers appropriate” (para. 14). These compliance and enforcement provisions are far stronger than anything found under CITES. This is quite important for CITES because Peru has long been lagging in complying with its enforcement obligations *vis-à-vis* mahogany exports.

Mahogany is listed in CITES Appendix II and therefore requires some of the specific implementation measures detailed in the forest annex. Critically important in understanding the power of this annex for CITES, however, is that the annex does not limit its applicability to mahogany. Rather, its requirements apply to *all* CITES-listed timber species irrespective of which CITES Appendix the species is listed in. This is important because, although mahogany is the only Appendix II-listed timber species in Peru, the country is also a range state for Appendix III-listed cedar (*Cedrela odorata*). Under CITES, implementation requirements for Appendix III-listed species is far more lenient than those for Appendix II. Therefore, the TPA’s timber management requirements contained in the annex apply more stringent controls to cedar than does CITES itself!

Implications for Global Environmental Politics

These new provisions, in and of themselves, certainly have important implications for global environmental politics. The protection of “covered” MEAs that use trade measures as a means of problem solving is an important statement about the value of environmental protection. The biodiversity article pushes the US into debates about traditional knowledge that it has been unable to codify in other forums. Perhaps most surprisingly, the TPA affords more protection to certain CITES-listed species than does CITES itself. Nevertheless, the true power of the TPA *vis-à-vis* environmental politics is in the linkage made to the dispute settlement.

Dispute Settlement

The US–Peru TPA’s Environment Chapter moves well beyond its predecessors in its provisions linking the Environment Chapter to the FTA’s primary Dispute Settlement Chapter (Chapter 21). Previous US FTAs included weak environmental consultation procedures for any disputes arising from the provisions of environment chapters, and explicitly exclude such disputes from remedy under formal dispute settlement. The implication of this limitation is of course that environmental consultation lacks the sanction-based remedy typically available under an FTA’s formal dispute settlement procedures.

Although not entirely cut off, access to dispute settlement prior to US–Peru (2009) was limited to non-derogation provisions (that is, those related to a country’s requirement to enforce its existing environmental laws). Further, available remedy for violation of this requirement was typically limited to US\$15 million annually, and had to be used for specific purposes, such as improving domestic environmental law enforcement. Although the US–Peru TPA’s Environment Chapter requires that environmental consultations be exhausted prior to seeking remedy under the FTA’s formal dispute settlement system, should consultations not succeed, there are no explicit limits on available remedy, or use thereof.

The implications of this are that the environmental provisions contained in the US–Peru TPA are for the first time subject to the sanction-based enforcement power of the TPA, rather than limited to the comparatively weak enforcement provisions for environmental issues under previous US FTAs. More importantly, because the US–Peru TPA articulates steps that Peru

must take to implement its obligations *vis-à-vis* mahogany under CITES, this linkage means that Peru's failure to implement those CITES provisions are now vulnerable to challenge under the FTA. This substantially increases the potential enforcement power of CITES.

The linkage to dispute settlement increases the enforcement power of CITES through "regulatory transference,"³¹ which occurred through the confluence of three mechanisms under this FTA. First, the CITES-relevant provisions are linked to the FTA through their inclusion in the forest annex and in the list of covered agreements. Second, successful implementation of the FTA is conditional on successful implementation of the forest governance annex (including on those provisions related to CITES). Third, and critically, failure to implement the CITES-relevant provisions contained in the annex and in the covered agreements section is subject to remedy under the FTA's dispute resolution system. In short, in strategically linking TPA and CITES implementation and enforcement capability, the TPA effectively transfers its strong sanction-based regulatory authority to the much weaker provisions of CITES.

Conclusions

The evolution of environmental provisions in US FTAs is a manifestation of larger normative shifts surrounding environmental policy that occurred in the US beginning in the 1980s and 90s and up to the current day. During this time US policy regarding trade–environment governance transitioned through three phases: (i) positioning global environmental governance as inherently inferior to trade governance; (ii) acknowledging global environmental governance as important through normative claims but resisting strong substantive linkages to trade governance; and (iii) tightly coupling global trade and environmental governance through the creation of specific benchmarks for the implementation of improved environmental performance.

The absence of environmental provisions in the US–Israel FTA (1985) is representative of the first era. The acceptance of environmental provisions in trade agreements as a new norm, but a norm without specific requirements for environmental protection or a strong enforcement mechanism, is the hallmark of the second era. This second era is represented by agreements starting with NAFTA up to the 2009 Oman FTA. Finally, the current era began with the US–Peru TPA, and is notable for the elevation of environmental concerns within trade politics to the point where leverage gained from trade negotiations is used to elicit specific environmental performance commitments backed by potential trade sanctions. In short, environmental provisions in US trade agreements have evolved from weak statements of non-derogation to strong mechanisms of transnational policy influence.

This most recent era of trade–environmental politics could have far-reaching implications for both global environmental politics and domestic participatory politics in trading partner nations. On the former, in linking the 2009 US–Peru TPA to CITES through enforcement provisions, the TPA effectively transfers its much stronger regulatory authority to CITES. This ultimately has the potential to increase CITES' effectiveness in ways that have been impossible under CITES alone. It is conceivable that such provisions could be replicated under future TPAs and through linkages to other MEAs aside from CITES. Although unlikely on a large scale, the ability to enforce MEA obligations through FTA dispute settlement systems would address one of the most cogent critiques of global environmental policy effectiveness (that is, its

³¹ Jinnah 2011.

unenforceability), and could change the political dynamics of international environmental policy-making.

On the latter point, although the US–Peru TPA’s environmental provisions are groundbreaking with far reaching implications for environmental regime effectiveness, they should not be blindly replicated. The US–Peru TPA catalyzed a host of unintended social on-the-ground costs in Peru. Most importantly, local and indigenous people were not given adequate opportunity to participate in the process. This contributed to their widespread discontent with some of the Peruvian government’s land-use-related implementation measures following the adoption of this agreement. Although the Peruvian government is in the process of remedying the impacts of this procedural oversight, it nonetheless catalyzed indigenous protests in June 2009, which resulted in the deaths of approximately 40 indigenous protesters and 23 police officers.³²

In the US and Peruvian joint efforts to conclude an important milestone in the economic relationship between the two countries, some environmental provisions were included without due consideration of their potential broader impacts on already marginalized communities. This is not to say that linkages between trade agreements and MEAs should not be pursued. Rather, the lesson here is that great potential (and leverage) exists for the US to pursue its environmental interests abroad. However, this comes with great responsibility. Before replicating similar policies into future trade agreements, the US (and others) must ensure that it not unintentionally influence domestic policy-making in trading partner nations in ways that run contrary to our own domestic standards for participation and transparency. In short, after many years of slow and intermittent development of trade–environment linkages, the US finally has a policy tool with great potential for global environmental problem solving. However, if its use is not carefully considered in a contextualized manner, concerns surrounding the legitimacy of these linkages may render the tool purely ephemeral.

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³² Associated Press 2009.

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PART V

KNOWLEDGE AND ETHICS

31 Environmental human rights: greening “the dignity and worth of the human person”

Ken Conca

This chapter examines the powerful yet controversial idea that environmental quality is a human right. The chapter pays particular attention to the trajectory of this idea within the United Nations, for two reasons. First, the UN has for several decades been the most important forum for the articulation, codification, and institutionalization of human rights. The family of human rights treaties nurtured by the UN have not only given structure to how the UN has approached human rights issues, but also have served as the central reference points for legal and political debates on human rights across the international system. Second, over the past few decades the UN human rights apparatus has broadened and changed considerably, moving from a legalistic foundation of state-based accords to a more active and institutionalized system of practice. This shift provides the most important opportunity for progress in realizing environmental human rights, today and for the foreseeable future.

Given the tight coupling between environmental quality and human well-being, it may seem self-evident that environmental protection should be understood as a human right. Taking stock of the UN record on human rights and the environment, however, we encounter a paradox. Both environmental protection and human rights are widely recognized as pillars of human development, and the UN has moved increasingly toward both rights-based and sustainability-oriented approaches to development. Yet little has been done to merge these two foundations by giving environmental human rights specific meaning or recognition. Indeed, the failure of the concept to flourish at the UN is systemic. Existing human rights treaties do not address the environment. Exhortations on environmental rights, occasionally found in General Assembly resolutions or global conference declarations, remain largely rhetorical ideals. Environmental rights initiatives emerging from specific UN organs such as the Commission on Human Rights (UNCHR) and its successor, the Human Rights Council (UNHRC), plod through the bureaucracy and gravitate toward statements of the least common denominator. As a result, governments and advocacy groups that seek to mobilize the UN on environmental protection find much resonance in the UN’s sustainable development initiatives and multilateral environmental treaties – but very little with which to work in the sphere of human rights.

The chapter begins by examining the debate over linkages between environmental protection and human rights. The argument that a rights-based approach is central to effective environmental protection and sustainable development is examined, along with some of the doubts, objections, and complexities that characterized the debate. The chapter then turns to the historical trajectory of links among human rights, the environment, and natural resources within the UN system. Here, it is critically important to understand the historical developments, in both the environmental and human rights arenas, that have both channeled and inhibited a rights-based approach to environmental protection. The chapter ends with an overview of recent efforts taking place within the newly broadened realm of UN human rights practice.

The Case for Environmental Human Rights

Environmental Protection as an Instrument of Human Rights

At first glance, it may seem obvious that environmental protection should be understood as a human right. Some of the most fundamental conditions for human life and human security have a direct environmental component: clean drinking water, breathable air, uncontaminated food. The advocacy organization EarthJustice cites rights to life, health, water, work, culture, information, participation, and shelter – all well established in international law – as the foundational basis for treating the environment as a human right.¹ Although the path-breaking 1948 Universal Declaration of Human Rights (UDHR) makes no explicit mention of the environment, it is hard to see how the rights named therein can have meaning without a healthy environment in which to realize them. Rights that obviously hinge on environmental quality include “life, liberty, and security of person” (Article 4); the right to property (Article 17); the right to social security (Article 22); and the right to an adequate standard of living (Article 25).² Considering the close ties between human-occupied landscapes, natural resource use, and cultural identity, one must also include in this list the right to a nationality (Article 15) and an individual’s right to “the economic, social and cultural rights indispensable for his dignity and the free development of his personality” (Article 22).

If environmental quality underpins these specific human rights, then pollution, loss of access to renewable resources, and the disruption of ecosystem services may threaten human rights. More specifically, we can specify at least four circumstances in which environmental harm can be understood to constitute a human rights violation:³

1. When people lack an adequately clean and healthy environment to enjoy such basic rights as the right to life, health, or food.
2. When people are denied participatory rights in decision-making processes about the environment or natural resource use.
3. When environmental impacts are distributed unfairly, forcing some social groups to bear a disproportionate burden of pollution and resource degradation (or, for that matter, of the costs and consequences of environmental protection).
4. When some people are denied a fair share of access to the benefits of nature and natural resources.

Often, these conditions occur in concert. Thus, in Europe, the Roma and other distinct minority groups have faced disproportionate environmental burdens.⁴ In the United States, race is a statistically significant predictor of who lives closest to hazardous waste facilities.⁵ Across the Amazon basin, controversial hydroelectric, mining, and petroleum projects have visited environmental impacts disproportionately on indigenous peoples and other economically marginalized communities.⁶ In each case, all of the preceding conditions apply: poor environmental quality undermines a community’s health and well-being; the problem can be

¹ EarthJustice 2008.

² UNGA 1948.

³ These four dimensions are adapted from Capacity Global 2009, 1.

⁴ Harper et al. 2009.

⁵ Bullard et al. 2007.

⁶ See, for example, Amazon Watch 2011.

traced to inadequate voice and representation in political and economic institutions where decisions about planning, site locations, resource use, and pollution control are made; the burdens are disproportionate when compared to the society as a whole; and a degraded environment denies people access to other benefits of nature or livelihood resources.

Such inequalities may play out along any dimension of social structure, including but not limited to race, class, gender, region, age, or identity group. They may also have important intergenerational dimensions, as current choices create conditions with which future generations will have to live. Some degree of inequality is probably inevitable, and in some instances may even be chosen by communities with different values or priorities. Inequalities become violations of human rights when they interfere with people's ability to enjoy the basic conditions of a life with dignity, when they are forced upon people who lack voice or recourse, or when they cross a threshold of disproportionality (however difficult it may be in practice to define such a threshold precisely).

One particularly important category of violations of environmentally related human rights occurs when, as Wolfgang Sachs explains, "the resource claims of core states collide with the subsistence rights of the periphery."⁷ Much of the environmental burden of the world's oil use, for example, is visited on poor and resource-dependent communities in the forests or coastal zones where oil fields are developed, including the Niger Delta, the Andean Amazon, and the Gulf Coast of North America, among others. Similarly, large dams built to power hydroelectric industrialization, to steer water into irrigation schemes, or to quench thirsty metropolises are typically located in remote areas where people (often, distinct minority communities) derive their livelihoods and cultural identities from ecosystems threatened by such projects. The same is true of industrial-scale mining enterprises, agricultural operations, and more recently, bio-energy schemes that feed critical raw materials into global commodity chains. As Sachs explains, here the human rights challenge is not simply inequality, but rather

to prevent a major reduction in people's existential circumstances. This is the case when physical, economic, and social conditions which already make a group of people particularly vulnerable are worsened to a point beyond the threshold of what they can reasonably be expected to endure. At a certain degree of vulnerability, then, burdens tip over into injustice and threaten the basic rights of the people involved.⁸

It should be recognized that along with pollution, resource degradation, and ecosystem disruption, environmental *protection* may also lead to human rights violations – in part because some strands of environmental advocacy have taken their inspiration from a "wilderness model" that presupposes the radical separateness of the human and natural spheres of existence.⁹ Nancy Peluso refers to cases in which international environmental initiatives have violated local community rights as instances of "coercing conservation."¹⁰ Anthropologist Mac Chapin has identified several instances in which global conservation organizations have undertaken projects that clash with, or inadequately consult, indigenous communities – in part, he suggests, because of a backlash in some quarters of these organizations against the "community-based" conservation schemes that emerged in the late 1980s and early 1990s.¹¹ As Joanne Bauer has

⁷ Sachs 2003, 9.

⁸ Sachs 2003, 6.

⁹ The material in this section draws upon Conca 2005.

¹⁰ Peluso 1993.

¹¹ Chapin 2004.

pointed out, such cases of coerced conservation may combine procedural and substantive rights violations:

Procedurally, inadequate inclusion of affected peoples in policy processes that both define and implement “public interest” results in undermining the right to livelihood and corresponding subsistence rights ... A fair resolution demands a recognition that both sets of values matter and must be incorporated into the policy solutions better than they have in the past.¹²

A classic example is the conflict over the Lacandon Selva in southern Mexico, where land struggles around the Montes Azules Biosphere Reserve have pitted poor settlers against state authorities and international environmentalists.¹³ As with the more frequent instances in which resource development schemes are the culprit, these cases involving ecological protection schemes underscore the close coupling between human rights and access to nature.

Human Rights as an Instrument of Environmental Protection

Just as environmental protection underpins the realization of an important array of human rights, a growing body of evidence suggests that human rights are central to effective campaigns for environmental protection. One reason for this is a changing understanding of the requisites of global environmental governance. I have argued elsewhere that the “Rio model” of global environmental governance, centered in a strategy of better environmental law between nations and sustainable development projects within them, is increasingly inadequate to the depth and scope of the task. This is so for several reasons, including the extensive transnationalization of environmental harm, the globalization of social relations, the ineffectiveness of states as environmental stewards, and the growing capacity of a wider range of stakeholders to inject themselves into transnational environmental policy processes.¹⁴ Under these circumstances, new approaches to global environmental governance are both increasingly necessary and increasingly imaginable.

This understanding of the changing modalities of environmental governance is mirrored in a July 1994 report to the UNCHR, prepared by the commission’s Special Rapporteur on Human Rights and the Environment:

International environmental regulations, which emerged from a worldwide movement and a collective realization of the dangers threatening our planet and the future of mankind, were initially sectoral and essentially envisaged within the traditional framework of inter-State relations; they have finally attained a global dimension, which has made possible the shift from environmental law to the right to a healthy and decent environment.¹⁵

If we accept this broader conception of both the necessities and possibilities of environmental governance, several causal links between human rights and environmental protection can be identified, including the following.

Human rights enable substantive environmental claims against the state Several decades into the era of global environmental politics, it has become apparent that governments, when left

¹² Bauer 2004.

¹³ Weinberg 2003.

¹⁴ See Conca 2006; and Park et al. 2008.

¹⁵ UNCHR 1994.

to their own devices, will consistently underprovide environmental public goods, both in the domestic sphere and when striking deals in the international realm.¹⁶ Rights-based environmental claims against the state need not be rooted in *human* rights, of course; effective property rights or rights of access to natural resources can be central to campaigns for environmental protection (or despoliation). However, given the chronic inequities in how such rights are allocated and the important public-goods dimensions of environmental protection, substantive rights to breathable air, clean water, and public health are indispensable tools for prodding governments into action.

Human rights enable access to regulatory arenas Process-oriented rights also play a key role in environmental action. Environmental protection is an important public function of the modern state, and as more and more governments build up established bodies of environmental law and policy, decisions about the environment increasingly occur in the context of technically complex, information-intensive regulatory processes. In such arenas, rights to equal protection under the law, access to information, and participation in the processes of government are fundamental to effective action. There is a large body of evidence that environmental protection works best when citizens' procedural rights – including access to information, notification about plans and projects, opportunities to exercise voice, and access to redress and grievance procedures – have real meaning in the corridors of environmental policy, municipal planning, and economic development.¹⁷ This reasoning is codified in Principle 10 of the Rio Declaration on Environment and Development, negotiated by governments at the 1992 Earth Summit:

Environmental issues are best handled with participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.¹⁸

Human rights create transnational normative force Turning from the legal to the political arena, rights-based approaches to environmental protection are also important for the normative force they may generate. Scholars of transnational advocacy campaigns have found that such campaigns often achieve greatest resonance when they are able to frame their cause in terms of threats of bodily harm or denial of the right of equality of opportunity.¹⁹ Over time, what started as loose and episodic transnational advocacy coalitions have consolidated into network-based mechanisms such as International Rivers, Rainforest Action Network, and Pesticide Action Network, which link environmental despoliation and human rights abuses to these themes of bodily harm and opportunity denied in the specific context of large dams, deforestation schemes, or pesticide use. I have argued elsewhere that this process of transnationalizing contentious environmental politics has been an important mechanism not only of registering grievances but of generating increasingly institutionalized forms of global environmental governance.²⁰

¹⁶ On the debate over greening the modern state, see Barry and Eckersley 2005.

¹⁷ World Resources Institute 2002.

¹⁸ UNGA 1992.

¹⁹ Keck and Sikkink 1998.

²⁰ Conca 2006.

Human rights defend environmental defenders A fundamental contribution of rights-based approaches is the shield that human rights campaigns may provide for environmental advocates who confront power and authority.²¹ *Environmentalists under Fire*, a report released jointly by the environmental organization The Sierra Club and the human rights organization Amnesty International in 2000, documented 10 high-profile cases of environmental advocates suffering human rights abuses for their efforts.²² To be sure, there are complex questions to ask about who has the power to define whom as an environmentalist. Memorializing Chico Mendes and Ken Saro-Wiwa as “environmentalists” – rather than as a rural trade-union organizer (Mendes) and an identity-group separatist (Saro-Wiwa) – may say as much about the power of media-savvy groups in the North to “brand” complex struggles than about the struggles themselves.²³ Nevertheless, high-profile international awards for environmental advocates such as the Goldman Prize and the Right Livelihood Award have often recognized and empowered individuals and local groups that have challenged large dams, oil and mining endeavors, and deforestation schemes at substantial personal risk.

Environmental Rights: Questions, Controversies, and Conundrums

Despite the many ways that environmental protection and human rights support and reinforce one another, careful consideration of the relationship also gives rise to a series of complex conceptual, legal, ethical, and strategic questions. First, what is the legal basis for claiming an environmental human right? Is adequate access to natural resource goods and environmental services best understood as an express right – a right in and of itself? Or are they simply among the requisite conditions for the realization of human rights? Is the environment an end of, or simply a means to, human rights? Given the limited references to the environment or natural resources in the “hard” international law of the main human rights treaties, how compelling is the body of either customary international law or non-binding “soft” international law, including multilateral conference declarations, General Assembly resolutions, and various other non-binding commitments?

Second, if some basis can be found for the environment as a human right, what type of right is it? Is it a socioeconomic right, analogous to a right to food or shelter, that requires certain substantive outcomes such as breathable air and drinkable water? Or is it better understood as a civil and political right, realized not in terms of substantive outcomes but rather civic processes, such as access to environmental information or participation in environmental deliberations? Or perhaps the environment is a so-called “third-generation”²⁴ human right – transcending the traditional distinction between “first-generation” civil/political rights and “second-generation” socioeconomic rights and akin, thus, to rights of self-determination or cultural heritage.

Third, whose right is it? Given that many environmental conditions and ecosystem services have the character of shared public goods, are environmental rights better understood as attaching to individuals, or to communities, or to entire nations? Who or what is the relevant “legal person” under international law entitled to environmental rights? Who is encumbered by the responsibilities that correspond to the rights?

²¹ Olagbaju and Mills 2004.

²² Amnesty International and Sierra Club 2000.

²³ Bob 2005.

²⁴ Vasak 1977.

Fourth, what sorts of obligations does any such right create, and to whom or what do those obligations attach? In international law, rights entail corresponding obligations on states: to respect, to protect, and to fulfill. However, as Dan Bodansky has pointed out, international environmental law consists not simply of the rights and obligations between states, but rather in the effort to regulate and reverse the economic, political, social, and psychological “spillovers” – across borders and among peoples – that go with various forms of environmental harm.²⁵ These forms of harm emanate not simply from the actions of states but also from a wide array of private actors. This complexity raises equally complex questions about what it means to respect, protect, and fulfill environmental rights.

Fifth, what are the consequences of treating the environment as a human right? Does it lead to an excessively human-centered view of the environment – a view that many environmentalists have said is at the heart of our planetary ecological maladies? Are human rights simply a stalking horse for property rights, supplanting broad movements for social justice with a narrowly individualistic, market-friendly approach?²⁶ Does the rights-based approach settle for a minimum standard – just enough clean water and breathable air to survive – rather than a call for distributive justice?²⁷ Is a rights-based approach to environmental protection a sound, progressive approach strategically, or does it settle for too little, too quickly?

Environmental Rights and the United Nations

Some of the barriers to progress linking human rights and the environment within the UN system are not difficult to understand. As suggested previously, the debate on environmental human rights is marked by conceptual complexity, legal uncertainty, ethical quandaries, and strategic disputes. These characteristics divide advocates, fragment coalitions, and stymie progress in already challenging intergovernmental deliberations.

A second barrier is historical. Until recently, the UN approach to protecting human rights has centered on treaties, most of which date to the UN’s pre-environmental era. The environment is not addressed in the two foundational treaties of the modern human rights era, the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social, and Cultural Rights, both of which the General Assembly approved in 1966. The Charter of the United Nations makes no mention of the natural environment; nor does the UN’s most important visionary statement on rights, the 1946 UDHR. All but a few of the most important human rights treaties were negotiated in the period before the 1992 Earth Summit, including accords on racial discrimination (1965), discrimination against women (1979), torture (1984), the rights of the child (1989), and the rights of migrant workers (1990). Finding only a few oblique references to the natural world in this core body of human rights treaty law, advocates of rights-based approaches to environmental protection have been limited to using indirect strategies: finding a derivative basis for environmental rights as necessary to more clearly codified rights such as life, health, culture, or shelter, and promoting “soft law” declarations on environmental rights from the General Assembly and at global conferences.

But historical barriers, conceptual complexities, and ethical and strategic quandaries are not a complete explanation for the lack of progress on environmental rights within the UN system. Other areas of human rights advocacy, in domains ranging from the rights of the disabled to

²⁵ Bodansky 2009.

²⁶ Rajagopal 2003.

²⁷ Atik 2004.

the rights of the child to the rights of indigenous peoples, have followed dynamic and progressive trajectories of development over the same time period. When the right political conditions and catalysts are present, the UN has shown itself capable of extending human rights concepts and practices in bold new directions, embracing non-incremental change to strengthen people's rights. One important factor enabling such progress is that the UN itself has changed and broadened as a setting for human rights work. Human rights work within the UN system, once centered on the core human rights treaties, has expanded into a much broader and dynamic field of activity, including the Office of the High Commissioner for Human Rights (established in 1993), the UNHRC (which replaced the ineffectual UNCHR in 2005), and the rights-related practices of a wide range of UN funds, agencies, and programs. As human rights scholar Julie Mertus has pointed out, the combination of a broader rights mandate, the development of these new organs, and the shift in emphasis from codification to implementation add up to a fundamentally new UN system of human rights practice.²⁸ This institutional diversification creates many entry points for rights advocacy.

The Historical Context: Pre-Stockholm to Post-Rio

Chronicles of the UN's environmental activity usually begin with the 1972 Stockholm Conference on the Human Environment. To be sure, rising concerns about pollution, resource depletion, and environmental health in the 1960s presented the UN with significant demands for adjustment in prevailing practices of economic development and global commerce. But it is important to recognize that these demands came after an equally difficult set of adjustments triggered by widespread decolonization after World War II and the rise of newly independent states wielding nominal sovereignty over their natural resources. From its inception, the UN was forced to wrestle with contentious questions about the meaning of national sovereignty over natural resources in the context of decolonization, new statehood, and global political economy. A careful reading of UN history shows that some critical commitments had already settled upon the UN in the decade prior to the Stockholm conference, with important consequences for how the UN would engage with and grow into the emerging environmental debate. Significantly, much of this early debate about resource sovereignty was framed explicitly as a human rights issue. The language of rights was central to the debate, and the human rights apparatus of the young United Nations became a central forum for deliberation, contention, and the framing of principles.²⁹

The adequacy of natural resource supplies for world commerce was of sufficient concern to the Allied powers that references to the issue found their way into the Atlantic Charter, the articles of agreement for both the International Monetary Fund and the World Bank, and the preamble to the General Agreement on Tariffs and Trade.³⁰ The 1950s saw a decade of often-contentious debate within the General Assembly, with overlays of socialist/capitalist conflict, tensions between nationalization and foreign investment, and the rights of weak states versus the interests of global economic enterprise. In these debates, developing countries in general and newly independent former colonies in particular sought simultaneously to exert sovereign control over their resources and to make sure that the sale of resource commodities in international markets would not be inhibited by protectionism or price instability. According

²⁸ Mertus 2005.

²⁹ What follows draws extensively on Schrijver 2007, 2010.

³⁰ Schrijver 2007, 594.

to Nico Schrijver, this debate on natural resources led to the contentious 1970s debate around the idea of a New International Economic Order.³¹

The resource–sovereignty debate of the 1950s ultimately framed natural resources rights in ways that have made it much more difficult to conceive of the environment as a human right. A critical byproduct of that debate was to affirm natural resources *as a right tied specifically to self-determination*, and thus to nations rather than individuals or localized communities. As early as 1952, the Chilean government proposed the following language – hotly disputed at the time – for the draft texts that would eventually become the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights:

The rights of the peoples to self-determination shall also include permanent sovereignty over their natural wealth and resources. In no case may a people be deprived of its own means of subsistence on the grounds of any rights that may be claimed by other States.³²

After intense disputes, the subsequent covenants would eventually soften and balance this nationalistic language, inserting references to international cooperation, mutual benefit, and international law – but preserving the formulation of natural resources as a collective right of “peoples” in the specific contest of self-determination.

The 1950s saw continued intense debate on resource sovereignty, with much of this discussion quite clearly understood to be about human rights. The General Assembly sent the matter not to its Second Committee on economic and financial matters, but rather to the Third Committee which handles human rights issues. The UNCHR also took up the question. The culmination of nearly a decade of contentious debate was the creation in 1958 of the UN Commission on Permanent Sovereignty over Natural Resources, which was charged with conducting “a full survey of the status of permanent sovereignty over natural wealth and resources *as a basic constituent of the right to self-determination*.”³³ This in turn led to the General Assembly’s 1962 Declaration on Permanent Sovereignty over Natural Resources, which defined permanent sovereignty over natural-resource wealth as a right of “*peoples and nations*.”³⁴ This frame of reference appeared shortly thereafter in the two foundational treaties of the modern human rights era, the Covenant on Economic, Social, and Cultural Rights and the Covenant on Civil and Political Rights. The two texts contain identical language:

All peoples may, for their own ends, freely dispose of their natural wealth and resources without prejudice to any obligations arising out of international economic co-operation, based upon the principle of mutual benefit, and international law. In no case may a people be deprived of its own means of subsistence.

With the concept thus embedded in the context of self-determination and nationhood, future resolutions would simply refer to the rights of *countries*.³⁵ In the wake of these developments, some developing countries have argued that permanent national sovereignty over natural resources rises to the level of *jus cogens*, or a hierarchically peremptory principle of international law.³⁶

³¹ Schrijver 2007, 597.

³² As quoted in Schrijver 2007, 595.

³³ UNGA 1962, emphasis added.

³⁴ UNGA 1962, emphasis added.

³⁵ UNGA 1966.

³⁶ As a matter of international law, the question remains unsettled. The arbitral tribunal in the case of *Aminoil v. Kuwait* (1982) rejected the *jus cogens* argument. See Shelton 2006, 302–3.

In other words, the framing of natural-resource management as a matter of self-determination and the collective sovereign rights of “a people” (read: a state) was already deeply embedded within the UN, as a matter of both formal international declaration and general political discourse, by the time the 1972 Stockholm Conference elevated the environmental question. It was not that a rights-based framework on the natural world had been overlooked prior to Stockholm, but rather that it had already been built – and channeled quite clearly into a framework of state sovereignty and national self-determination.

Thus, when the environmental issue burst onto the UN stage beginning in the late 1960s, it slid fairly quickly into the most “sovereignty friendly” of the UN’s four charter-based mandates, those on development and international law, with the mandates on human rights and peace lagging behind. This is not to suggest that the concept of environmental rights was entirely absent from Stockholm. The first principle of the conference declaration agreed upon at Stockholm asserted that “Man has the fundamental right to freedom, equality and adequate conditions of life in an environment of a quality that permits a life of dignity and well-being.”³⁷ But developing countries had a strong interest in not seeing environmental concerns derail the two-decades-long battle they had just fought over natural-resource sovereignty; many industrial countries, for their part, had no particular desire to find a new array of social and economic rights centered on environmental protection.

In this context, as Alan Boyle has pointed out, the developmental trajectory of global environmental governance from Stockholm 1972 to Rio 1992 can be seen as a step backwards for the idea of environmental human rights.³⁸ The emerging architecture of global environmental governance during this period centered primarily on the developed-country concern for international environmental accords and the developing-country concern that development needs be a central part of the conversation. Contrast the preceding language in the Stockholm Declaration with the much softer statement of the 1992 Earth Summit’s Rio Declaration, 20 years later: “Human beings are at the center of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature.”³⁹ Agenda 21, the vast blueprint for sustainability emerging from Rio, makes no mention of the environment as a human right, and limits its discussion of the environment–rights linkage primarily to occasional endorsements of group rights (women’s rights, indigenous people’s rights, the land rights of the poor) as instrumentally useful for addressing the environment–development–poverty nexus. A careful reading of Agenda 21 does reveal several passing references to rights-based approaches that would later flourish – including passages that call on governments to affirm the rights of nongovernmental organizations (NGOs)⁴⁰ and qualified support for community right-to-know provisions – but these are largely marginal and incipient.⁴¹ On hot-button issues such as biological diversity and marine exploitation, Agenda 21 takes care to reaffirm the natural-resource sovereignty rights of states laid down in the pre-Stockholm era.

Developments since Rio

In the wake of the 1992 Rio Earth Summit, developments within the United Nations on environmental human rights have been shaped by an odd confluence of dynamism and stasis.

³⁷ *Declaration of the United Nations Conference on the Human Environment*, Principle 1, adopted 16 June 1972.

³⁸ Boyle 2007.

³⁹ UNGA 1992, Principle 1.

⁴⁰ United Nations 1992, Section III, Chapter 27, paragraphs 27.10 and 27.13.

⁴¹ United Nations 1992, Section II, Chapter 19, paragraph 19.8.

On the human rights side of the equation, as suggested previously, we have seen great dynamism and a widening field of practice. On the environmental side, however, the dominant feature of the landscape remains an entrenched paradigm of global environmental governance as law between nations and development within nations. In this context, the effort to recognize a substantive human right to environmental quality has proceeded at a snail's pace, even as the practice of rights-based approaches in environmental policy have increasingly begun to take hold.

The failure of Rio to catalyze rights-based approaches was apparent one year later at the UN-sponsored 1993 World Conference on Human Rights, held in Vienna. The final report of the Vienna conference made only a few passing references to the environment, flagging illicit toxics dumping as a human rights violation and alluding to developments at Rio only to affirm the rights of women to "sustainable and equitable development."⁴² Most notably, and consistent with the Rio model, Vienna also affirmed the right to development as the principal means to achieving environmental sustainability.⁴³

In 1989 a coalition of NGOs prodded the UN Sub-Commission on Prevention of Discrimination and Protection of Minorities – at that time a standing sub-commission of the UNCHR – to "study the connections between human rights and the environment."⁴⁴ This set in motion the appointment of a Special Rapporteur on Human Rights and the Environment, who in turn convened an expert working group that in 1994 drafted a set of principles on human rights and the environment.⁴⁵ The principles asserted that "All persons have the right to a secure, healthy and ecologically sound environment," and identified several clusters of rights: freedom from pollution, environmental degradation, and environmentally adverse activities; "protection and preservation of the air, soil, water, sea-ice, flora and fauna, and the essential processes and areas necessary to maintain biological diversity and ecosystems;" safe and healthy working and living conditions; and an equitable share of the benefits of conservation and sustainable resource use. The draft principles also stressed that certain procedural rights related to the environment, including "the right to active, free, and meaningful participation in planning and decision-making activities and processes that may have an impact on the environment and development," were necessary to the realization of those substantive rights.⁴⁶

The Special Rapporteur's final report, issued in 1994, acknowledged that the right to a "healthy and flourishing" environment was an "evolving" right, about which there was not yet a general consensus and for which there were "few specific provisions" in international human rights instruments.⁴⁷ The report recommended that several UN human rights treaty bodies, committees, and working groups examine the environmental dimensions of their respective domains of responsibility and called upon the UN to adopt "a set of norms consolidating the right to a satisfactory environment."⁴⁸ The UNCHR demurred. It called instead for comments from member states (few of which were forthcoming); it requested and received a report from the Secretary-General (which contained no recommendations), and it appointed a special rapporteur with a much narrower mandate on human rights and shipment of toxic wastes.⁴⁹ In

⁴² UNGA 1993, Paragraph 36.

⁴³ UNGA 1993, Paragraph 11.

⁴⁴ EarthJustice 2005, 2.

⁴⁵ UN Sub-Commission on the Prevention of Discrimination and Protection of Minorities 1994.

⁴⁶ UN Sub-Commission on the Prevention of Discrimination and Protection of Minorities 1994, preamble.

⁴⁷ UNCHR 1994, 3 and 9.

⁴⁸ UNCHR 1994, Paragraph 261.

⁴⁹ See EarthJustice 2005, 1–5.

2005, another report by the Secretary-General prepared at the request of the UNCHR found that there had been “growing recognition of the connection between environmental protection and human rights” in the work of various human rights treaty bodies, the UNCHR, multilateral environmental agreements, and various regional and national institutional and jurisprudential developments.⁵⁰ But, once again, the report included no specific recommendations for action. Whatever momentum for a substantive finding of environmental human rights might have been generated by these activities of the UNCHR appears to have been lost in the dismantling of the UNCHR and its replacement by the new UNHRC in 2006, as the latter body has not revisited the issue (although as discussed below, UNHRC has become active on the more specific question of climate change and human rights).

Moving Forward: Beyond the UN

Meanwhile, the world has not stood still on the question of environmental rights in the absence of a coherent UN human rights framework. According to Dinah Shelton, “On the national level, more than 100 constitutions throughout the world guarantee a right to a clean and healthy environment, impose a duty on the state to prevent environmental harm, or mention the protection of the environment or natural resources.”⁵¹ The French Constitution was amended in 2005 to add a Charter of the Environment. Regional organizations have also filled the void. Article 24 of the 1981 African Charter on Human and Peoples’ Rights states that “All people shall have the right to a general satisfactory environment favorable to their development.”⁵² The 1969 American Convention on Human Rights, in its 1988 additional protocol on economic, social, and cultural rights, states that “Everyone shall have the right to live in a healthy environment and to have access to basic public services” and calls upon States Parties to “promote the protection, preservation, and improvement of the environment.”⁵³ Procedural environmental rights have also gained traction, most notably in the *Convention on Access to Information, Public Participation and Access to Justice in Environmental Matters*, catalyzed by the UN Economic Commission for Europe and signed in Aarhus, Denmark in 1998.

As constitutional rights and international legal instruments have begun to appear, so too has a body of case law.⁵⁴ A 2009 expert meeting organized by the United Nations Environment Programme (UNEP) and the Office of the High Commissioner for Human Rights (UNOHCHR) noted “the growing trend in international and regional courts and tribunals to consider human rights issues when adjudicating on environmental disputes” while cautioning that “the law in this area suffered from a lack of coherence.”⁵⁵ At the international level, much of the case material is generated through complaints heard by regional and UN treaty bodies (although the African Commission on Human and Peoples’ Rights also has a mandate to monitor state compliance).⁵⁶ At the national level, Shelton’s survey of the field finds wide variation in rights, interpretation, and enforcement, but suggests that “The constitutional rights granted are increasingly being enforced by courts.”⁵⁷ She also concludes, however, that “in the absence of

⁵⁰ UNCHR 2005, 2.

⁵¹ Shelton 2009.

⁵² *African Charter on Human and Peoples’ Rights*. Adopted June 1981, Nairobi, Kenya.

⁵³ *Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights*, Article 11. Adopted at San Salvador, El Salvador, 17 November 1988.

⁵⁴ For an extensive overview, see Shelton 2009.

⁵⁵ UNEP no date.

⁵⁶ Shelton 2009, 7.

⁵⁷ Shelton 2009, 27.

a clear international text articulating the links between human rights and the environment, the difficulties facing courts presented human rights claims based on environmental harm are significant.”⁵⁸

Across the UN System: A Widening Field of Practice

Even as the effort to create a substantive right to environmental quality has slogged through the UN human rights apparatus, a growing recognition of environment–rights linkages can be seen across the wider UN landscape. Part of this is manifest in the form of rights-based environmental initiatives. The Environment and Energy program within the UN Development Programme (UNDP), for example, has launched a rights-based initiative on “strengthening the rationale for devolving substantive resource rights by improving communication between local and state actors, demonstrating the benefits of community-driven approaches, and increasing the ability of state officials to identify local best practices.”⁵⁹ The UNDP also has an initiative on strengthening community voices in policy processes that emphasizes building capacity to participate meaningfully in national and international energy and environmental policy forums.⁶⁰

The other side of growing recognition of environment–rights linkages involves more environmentally sensitive understandings of how to realize existing and generally recognized human rights. In this context, while the Human Rights Council has not sustained even the modest momentum on environmental rights of its predecessor body, the Commission on Human Rights, it has begun to mobilize on the specific issue of climate change. Resolution 7/23 of March 2008 recognized that “climate change poses an immediate and far-reaching threat to people and communities around the world and has implications for the full enjoyment of human rights.”⁶¹ One consequence of the UNHRC’s attention to climate change has been to mobilize the “bully pulpit” function of the High Commissioner for Human Rights, which the UNHRC tasked with conducting an analytic study of the relationship between climate change and human rights. The January 2009 report provides a forthright and extensive discussion of the causal links between the expected effects of climate change and a range of specific rights (life, food, water, health, housing, and self-determination), with particular attention to the impact on vulnerable subgroups (women, children, and indigenous groups). A key theme of the report is that international cooperation on climate change “is not only expedient *but also a human rights obligation and that its central objective is the realization of human rights.*”⁶²

In the wake of the OHCHR report, the UNHRC in June of 2009 held a panel discussion on climate change and human rights, the results of which were reported to the Conference of the Parties of the UN Framework Convention on Climate Change. The most important output of the discussion was the delegates’ emphasis on the ways in which a human rights framework refocuses the climate problem; they stressed that such a lens “focused the debate on climate change more directly on the real-life effects on the lives of individuals and communities,” shifted attention to those most vulnerable “and to the need to ensure that their rights are protected,” empowered the voice of individuals and communities, and “introduced an

⁵⁸ Shelton 2009, 28.

⁵⁹ UNDP no date (a).

⁶⁰ UNDP no date (b).

⁶¹ UNHRC 2008.

⁶² UNGA 2009, 30, emphasis added.

accountability framework, holding governments accountable for reducing the vulnerability of their populations to global warming.”⁶³

The spread of rights-based environmental action remains uneven in the UN family of organizations. For example, the UN Committee on Economic, Social and Cultural Rights (UNCESCR) released its General Comment 14 in 2000 on the right to health. The General Comment identifies environmental conditions as one of the “underlying determinants” of health, and conceives of the right to health as “inclusive” of those determining conditions.⁶⁴ Since its release, the World Health Organization (WHO) has strengthened its emphasis on a rights-based approach. However, WHO’s 2008 handbook *Human Rights, Health and Poverty Reduction Strategies* makes only passing mention of environmental rights and health linkages.⁶⁵ In the case of the right to food, UNCESCR’s General Comment 12 identifies the right to food as “inseparable from social justice, requiring the adoption of appropriate economic, environmental and social policies, at both the national and international levels, oriented to the eradication of poverty and the [sic] fulfilment of all human rights for all.”⁶⁶ Yet the Food and Agriculture Organization’s principal instrument in this area – its “Voluntary Guidelines” for states on realizing the right to food – draws no links to rights-based approaches to environmental protection, and merely calls on states to “consider” national policies, legal instruments, and supporting mechanisms on environmental protection as it relates to the right to food.⁶⁷

Conclusion

In 2009, UNEP and OHCHR jointly convened a “High Level Expert Meeting” on “The New Future of Human Rights and Environment: Moving the Global Agenda Forward.” The experts identified three fundamental linkages between the environment and human rights: the role of procedural and process rights (for example, to information, participation, and redress) as a key to effective environmental protection; the role of environmental protection as a requirement to the effective realization of recognized human rights (for example, health, food, water); and the idea of environmental quality as a substantive human right in and of itself.⁶⁸ While the latter has ground its way slowly (and perhaps to a halt) through the UN’s international legal machinery, the twin linkages reflected in the workshop’s other two points – environmental pathways to realizing human rights, and rights-based pathways to environmental protection – can be seen across an uneven but widening array of UN practices.

Perhaps the most important effect of this twinned focus is the creation of a new sensibility in the domain of global environmental governance. According to UNGA’s 2009 report on climate change, a human rights approach “serves to empower individuals and groups, who should be perceived as active agents of change and not as passive victims.”⁶⁹ This point was made forcefully by Raquel Rolnik, the UN Special Rapporteur on adequate housing as a component of the right to an adequate standard of living, in remarks to the UNHRC’s 2009 panel discussion on climate change. She suggested considering the climate question by applying

⁶³ UNOHCHR 2009, 1.

⁶⁴ UNCESCR 2000.

⁶⁵ WHO 2008.

⁶⁶ UNCESCR 1999.

⁶⁷ FAO 2005, 19.

⁶⁸ UNEP no date.

⁶⁹ UNGA 2009, 30.

a human rights lens to the biblical metaphor of Noah's Ark: "First question: Who is going to build the ark? But [the] second question, which is even more important than the first one: For whom will the ark be accessible?"⁷⁰

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⁷⁰ Rolnik 2009.

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32 Thinking like a planet: Gaian politics and the transformation of the world food system

Karen Litfin

Science influences culture not only through its contributions to technological development, but also through the concepts and metaphors it offers for enlivening social, political, economic, and ethical life. From the eighteenth century onward, the Newtonian world of atomistic bodies in motion was grafted onto a socio-political philosophy of possessive individualism.¹ Beginning in the late nineteenth century, metaphors from Darwinian biology infiltrated social, political, and economic discourse. With the emergence of environmental awareness in the late twentieth century, the language of ecology quickly found its way into political discourse, and its metaphors of biologically rich networks and interdependence found a happy home in the budding field of environmental ethics. As early as 1949, Aldo Leopold, a prescient wildlife ecologist, established the discursive context for this new field when he made the radical shift from an anthropocentric to a biocentric ethics. According to his “land ethic,” “a thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise.”² Leopold further advised his readers to “think like a mountain.” In other words, before acting, consider the web of relationships among organisms and their envioning rock, soil, water, air, and sun that will be affected.

Yet, however ancient and massive it might be, a mountain remains a local phenomenon, while many of our most pressing problems are global. “Think globally, act locally,” the saying goes, but just how do we think globally? Gaia theory, an interdisciplinary scientific perspective that understands Earth holistically as an integrated, self-regulating biogeochemical system, offers a rich portfolio of concepts and imagery for “thinking globally.” The theory, first proposed in 1970 by British chemist James Lovelock, has developed from a controversial hypothesis to a broadly accepted set of ideas about the deep interpenetration among Earth’s physical, chemical, and biological features. By virtue of its whole-systems understanding of our planet’s functioning, Gaia theory offers both practical and philosophical guidance for addressing what is likely to become the preeminent question of the twenty-first century: how to harmonize human systems with the larger Earth system.

From the beginning, Gaia theory was as much a cultural phenomenon as it was a scientific hypothesis. In response to his first book, Lovelock was astonished to receive twice as many letters from people intrigued by its religious and spiritual aspects as from those with a more scientific bent.³ Gaia theory awakens us to the crucial fact that human systems are embedded in and utterly dependent upon a greater whole, a fact that for many evokes a sense of wonder and awe. In a wider cultural context, Gaia theory serves not only as a model depicting the co-evolution of life and Earth’s geophysical systems, but also as an archetypal metaphor for wholeness, interconnectedness, and belonging.

¹ Macpherson 1962.

² Leopold 1949, 204.

³ Lovelock 1979, xi.

Gaia theory has come on the scene just as the twin phenomena of globalization and environmental destruction compel a planetary perspective on human systems. If the task, then, is to harmonize human systems with the Earth system, how might Gaia theory inform our efforts? The following section offers a socio-political reading of Gaia theory, tracing some implications of three qualities of living systems – holism, autopoiesis, and symbiotic networks – for human systems. Unlike Gaia’s great biogeochemical cycles, the global economy functions on a linear model that moves from resource extraction to production to consumption to waste. Yet the generativity of living systems can only be sustained for so long under a linear model. Ultimately, sustainability requires thinking in circles.

Given that human systems are ultimately a subset of Gaia and that our global economy is now producing Gaian-scale perturbations, we might wish to identify (and perhaps rectify) the weakest link in our systems. The second half of this chapter suggests that the world food system is already showing signs of being that most vulnerable link. The convergence of industrialized agriculture and political institutions rooted in a free-market ideology has spawned an exceedingly complex global food economy that enables billions of people to eat food they could never have eaten in the past. Yet, as the 2008 world food crisis signaled, this system is becoming increasingly susceptible to catastrophic disruption. Agriculture, probably more than any other human endeavor, is responsible for destabilizing our planet’s carbon, nitrogen, phosphorus, and water cycles. Gaia, however, is not at risk, as I argue in the next section. With or without us, “she” will find a new equilibrium; meanwhile, it is we who must find a way to feed ourselves within her limits. Nonetheless, there is reason for optimism. A Gaian analysis also reveals that the world food system may be the best point of intervention for harmonizing human systems with the Earth system.

A Socio-political Reading of Gaia Theory

Gaia is more than a testable scientific hypothesis. It conveys a philosophical view of Earth as a living, self-generative system, a view with both ancient roots and potentially far-reaching implications as planetary perturbations escalate in the coming decades. Throughout history, the perception of Earth as a living, intelligent being was widespread and perhaps even the norm. After the scientific revolution, however, the “living Earth” persisted only as minority perspective. As Bruce Scofield and others have argued:

The seventeenth century was witness to a momentous shift in natural philosophy. The Earth was no longer perceived as living; it was dead and quantifiable, and this was very much in tune with the agenda of the rising forces of capitalism. The idea of matter as living and the cosmos as interconnected was not a view that supported this new capitalistic agenda. Dead nature, on the other hand, was more convenient; it presented no moral conflicts in regard to exploitation for profit.⁴

After Descartes, Western science and philosophy generally understood the world as a machine, a view that has been increasingly globalized in recent decades. Yet, in the larger context of human thought, including the West, the mechanistic view of nature is an aberration.

Ironically, the Gaia hypothesis was born from the search for extraterrestrial life. Lovelock’s analysis of the atmospheres of Mars and Venus for NASA (National Aeronautics and Space Administration) in the 1960s, yielded a fresh look at Earth’s highly anomalous atmosphere. The

⁴ Scofield 2004, 157. For further discussion of the modern shift from an organic to a mechanistic worldview, see Merchant 1980.

“amazing improbability of the Earth’s atmosphere” includes the persistence of highly reactive oxygen and methane in constant quantities and carbon dioxide in minute quantities. Approximately one billion tons of methane and two billion tons of oxygen must be introduced into the atmosphere each year, and the only explanation he could find was “the invisible hand of life.” Most of Earth’s atmosphere, it turns out, recently existed as parts of living cells. Likewise, life has kept Earth’s temperature in a relatively narrow range for 3.5 billion years, even as the Sun increased its output by at least 30 percent. Gaia theory postulates that life does not merely adapt to its environment; it co-creates its environment. “Life, therefore, is a property of planets rather than of individual organisms.”⁵ Our blue planet functions much like a supraorganism with internal metabolic systems of temperature and chemical modulation, enveloped by an atmospheric membrane that separates it from an otherwise lifeless Solar System.

Gaia theory articulates “a new iteration of an old intuition” – the ancient Earth goddess, reborn late modernity. Yet while Gaian holism corroborates a planetary perspective, it also tempers that perspective with a strong cautionary note. The fossil-fuel-driven extravaganza of globalization has opened a Pandora’s Box of global changes, compelling us to situate our lives at every level, from the household to global governance, within the systemic logic of Gaia.

Systems theory is a conceptual tool for separating one part of the universe from the rest in order to understand how it operates under various conditions. There are three broad types of systems.⁶ Hard systems include electrical grids, machines, and transport systems. Because of their linear logic, they do well in terms of short-term efficiency, predictability, and performance. Living systems, of which Gaia is the largest known instance, are nested systems of biota and their environments. The emergent properties of these complex systems transcend the linear logic of purely physical systems, requiring a more dynamic and holistic approach. Soft systems encompass the full panoply of human institutions: marriage, warfare, schools, corporations, governments, clubs, and so on. The human faculties of perception, intention, interpretation, and imagination, however, make soft systems far more complex and dynamic than other living systems. Interestingly, the global repercussions of hard-systems thinking are becoming evident just as living-systems thinking, including Gaia theory, counsels an alternative.

Living systems theory offers several core concepts that can help to steer human systems toward sustainability; Gaia endows these with a planetary scope. Holism helps us to see that systems are more than the sum of their parts. Autopoiesis, or the self-generative quality of living systems, ensures systemic continuity through constant change. Symbiotic networks entail a reciprocal entanglement of Earth’s organic and inorganic parameters, propelling Gaia’s great nutrient-waste cycles.

Holism

In popular parlance, holism means that the whole is more than the sum of its parts. In other words, systems have emergent properties such that their behavior is not reducible to their component parts. An organism, for instance, is qualitatively different from the sum total of its cells or organs. In brain science, cognition is an emergent property of neural networks. Likewise, Gaia’s emergent properties arise out of the interaction of Earth’s atmosphere, lithosphere (soils and rocks), hydrosphere, and biosphere.

⁵ Morowitz 1992, 6. This does not mean that Earth is literally alive; rather, like an ecosystem, it functions as a living system.

⁶ This threefold typology is adapted from Checkland 1981; and Madron and Jopling 2003, 30–31.

Humanity is now operating on a Gaian scale. The rate of species extinction is between 1,000 and 10,000 faster than in the pre-industrial era, rivaling the last great wave of extinctions 65 million years ago.⁷ Climate scientists predict that global temperatures will rise between 1.5 and 6 degrees Celsius in the coming century, a warming on the order of the shift from the depths of the last ice age to the present interglacial period.⁸ All of the key Gaian biogeochemical cycles are being altered by human action. As Robert Clark argues, a globalized humanity is gradually outcompeting other life forms. Since 1860, the proportion of terrestrial biomass represented by humans and their domesticated animals has quadrupled from 5 to 20 percent, and may rise to 60 percent in the next 50 years. Globalization has been “a tragedy for terrestrial life forms” and its long-term success, even for humanity, is far from assured.⁹

Some environmentalists criticize Gaian holism because they believe it encourages complacency. Lovelock’s early claims that Gaia would patch up the ozone hole reinforced this uneasy relationship between greens and Gaia.¹⁰ Yet complacency would be a tragically shortsighted misreading of Gaia theory. While some may find solace in the fact that Gaia always establishes a new homeostasis after each “catastrophe,” any future equilibrium state will almost certainly be far less favorable for humans than the present one. Human civilizations emerged in a rare inter-glacial period in which species diversity was probably at its all-time high. A healthy dose of prudence is therefore in order. “Gaia is stern and tough,” Lovelock cautions, “always keeping the world warm and comfortable for those who obey the rules, but ruthless in her destruction of those who transgress.”¹¹ Gaia theory is helping to uncover those rules.

Gaia theory’s holism contributes to political thinking in two ways. First, prioritizing the functioning of the Gaian system as a whole calls into question both anthropocentrism and individualism. Second, Gaia theory is at once resonant with *and* challenging of globalization, calling for a planetary perspective while casting doubt upon the long-term viability of globalization’s current trajectory.

Autopoiesis

Living systems, including human systems, are autopoietic (“self-making,” from the Greek). They continually regenerate themselves, undergoing constant change while preserving their web-like pattern of structural integrity.¹² Through a constant influx of energy (in Gaia’s case, from the sun), a living system can counter the tendency towards entropy. Gaia’s fundamental autopoietic processes were devised when bacteria colonized the planet during Earth’s first two billion years: reproduction, photosynthesis, fermentation, nitrogen fixation, respiration, and locomotion. Gaia theory predicts long periods of stability until some drastic change, like an asteroid impact, precipitates a crisis and a subsequent systemic shift to a new geochemical equilibrium.

Human systems, the largest being the global economy, are also autopoietic.¹³ Unlike Gaia’s great biogeochemical cycles, the global economy operates principally on a linear model that

⁷ United Nations Environment Programme 2002.

⁸ Intergovernmental Panel on Climate Change 2006.

⁹ Clark 1990.

¹⁰ Shannon 1991.

¹¹ Lovelock 1990, 212.

¹² Maturana and Varela 1998.

¹³ Luhmann 1990.

moves from resource extraction to production to consumption to waste. Yet self-generativity can only be sustained for so long under a linear model. Ultimately, sustainability requires thinking in circles.

Gaia theory predicts that when a species' actions favor both its environment and itself, it will tend to spread. We may therefore be tempted to optimistically infer from humanity's rapid globalization that our activities are favorable to (or at least compatible with) Gaia. This logic ignores the fact that Gaian time scales are vastly longer than human concepts of time. A period of 100,000 years dwarfs human history, yet represents only 0.003 percent of Gaia's lifespan. Human-induced climate change will persist for millennia, scientists predict, but only in 1996 did they reach a consensus that it has begun. The sobering fact is that we are running a planetary experiment, the results of which are unpredictable.

The concept of autopoiesis raises an important philosophical question. If a living system somehow "makes itself," does it do so purposefully? Because it hinted at such a possibility, Lovelock's original Gaia hypothesis met with intense criticism. He countered with a purely biophysical model showing how a planet could regulate its temperature cybernetically, without any intentionality.¹⁴

Purpose, however, is essential to human systems. While a human system's purpose might be misunderstood, ignored, debated, and even obscured, reconfiguring the system from its base requires identifying its purpose(s) and implicit values. The global economy is self-generating, but does it have an orienting purpose? Growth, development, prosperity – these are different words for what many would agree is the system's underlying purpose. Some might say that economic growth is only a means to a greater purpose of increasing human happiness, but the link between wealth and happiness is a murky one at best. Growth as the system's purpose is evident in its almost universal acceptance – across the political spectrum from left to right, and around the world from North to South. Even amid radical disagreement on how to pursue economic growth, we find a striking consensus on its desirability. Yet because infinite growth on a finite planet is impossible, this purpose will inevitably get us into trouble.

If human systems are to persist as a global subsystem of Gaia, then we shall need to align our purposes with the functioning of Gaia. The longer we wait, the greater the risk. Reconfiguring the current system entails rethinking our purposes beyond the growth imperative. To borrow from Leopold, preserving the integrity and stability of the Gaian system must become a core human purpose. This need not preclude other purposes, such as justice or the growth of knowledge; these, indeed, are essential to viable human systems.

Symbiotic Networks

Gaia theory depicts the Earth system as a vast autopoietic network of interlinked communities. In this sense, Gaia, like other living systems, is inherently social in the sense that it comprises nested collectives. Every organism within Gaia, including the human body, contains the heritage of billions of years of interaction among sunlight, soil, air, water, and the biosphere. Living systems, including human systems, are autonomous only in the sense that they maintain some degree of structural integrity. This radical concept of systemic interdependence stands in contrast to modern political and psychological notions of human independence. Just as modern psychology is oriented towards the autonomous ego, modern political thought is premised on individual rights and state sovereignty. Yet, as Gaian scientists observe, "independence is a

¹⁴ Lovelock 1990, Chapter 3.

political, not a biological term.”¹⁵ Even the “individual” person is host to and utterly dependent upon billions of bacteria. Likewise, human well-being depends upon the ceaseless generative and decompositional work of plants, phytoplankton, bacteria, fungus, and earthworms.

Living systems are constituted through symbiosis, whereby dissimilar entities coexist in a mutually beneficial arrangement. Contrary to the neo-Darwinist view of life as a harsh competition for survival, Gaia theory understands cooperation as much more the rule. Bacteria, the most long-lived class of organisms and the basis of all subsequent life, “live by collaboration, accommodation, exchange, and barter.”¹⁶ At the macro-scale, Gaia is the result of eons of symbiogenesis.¹⁷ In the words of microbiologists Margulis and Sagan, “Life did not take over the globe by combat, but by networking.”¹⁸

On a global scale, the human system comprises innumerable networks of communication in the arenas of production and consumption, diplomacy and warfare, advertising and entertainment, education and ritual, none of which could function without cooperation. Yet the driving force of the global economy is competition: firms compete with one another for resources and markets; workers compete for jobs; countries compete for investment. Indeed, the individualistic race to extract resources and transform them into consumer products, waste, and profits is often legitimated in the Darwinian language of “survival of the fittest.”

This linear model is profoundly at odds with ecology. In living systems, one species’ waste is always another species’ food. Likewise, Earth’s major nutrients – carbon, hydrogen, oxygen, and nitrogen – are continually recycled. For Gaia, there is no “out there” into which “waste” can be dumped. Yet industrial societies are based upon “the toilet assumption,” the implicit belief that waste can be simply “flushed away.”¹⁹

Ecological principles based upon cyclical processes and symbiotic networks, however, are being (re)introduced into human systems. The recent growth of consumer-based recycling is one such trend, although it has not served to decrease overall consumption or waste production.²⁰ *Virtuous cycles*, as opposed to vicious cycles, move toward the elimination of waste.²¹ Some promising examples include zero-emissions production processes, community-supported agriculture, and “cradle-to-cradle” design. In contrast to the linear industrial model, the emerging field of ecological design “introduces us to an era based not on what we can extract from nature, but on what we can learn from her.”²² Likewise, symbiotic social networks are generating a host of virtuous cycles.²³

Applying Gaia principles to human systems will require an epic shift, reorienting our thinking and actions toward a participatory embeddedness in the greater whole. Principles of ecological design and symbiogenesis would become foundational rather than peripheral, sparking revolutionary changes in architecture, transportation, farming, financing, and industrial practices.

¹⁵ Margulis and Sagan 1995, 26.

¹⁶ Thomas 1974, 6–7.

¹⁷ Margulis and Sagan 1995, 156.

¹⁸ Margulis and Sagan 2001, 11.

¹⁹ Slater 1970.

²⁰ Recycling “works within the same system that caused the problem in the first place, merely slowing it down with moral proscriptions and punitive measures.” McDonough and Braungart 2002, 62.

²¹ Madron and Jopling 2003, 35.

²² Beynus 1997, 2.

²³ See Botsman and Rogers 2010; and 350.org.

A Note on Global Justice

Because Gaia's "big picture" perspective displaces anthropocentrism, we might be tempted to sidestep the thorny questions of justice and equity and get on with the business of "saving the planet." Again, however, it turns out that Gaia underscores the human questions. When we could naively assume that infinite growth on a finite planet was possible, we could also imagine that development would eventually be universalized. Today, we are faced with the dawning awareness that the overconsumption of the North cannot be globalized without destabilizing Gaia. Developing countries, representing 80 percent of the human population, are the wave of the future. They will not voluntarily change their development trajectories in the absence of a compelling moral and practical exemplar, nor without financial and technological assistance, from the wealthy countries. Justice, therefore, becomes a matter of "geoecological realism."²⁴ While Gaia's planetary perspective may undercut humanism in the big picture, the pragmatic requirements of moving toward sustainability have the surprising effect of highlighting questions of justice and equity. Gaia's planetary perspective reminds us that we are all in this together. Importing Gaian insights into the social arena requires, therefore, that we pay attention to the needs and aspirations of those who are less well off than ourselves.

The World Food System through a Gaian Lens

If human systems are out of sync with the Gaian system, as most environmental trends indicate is the case, then it makes sense to consider three questions: which of these systems have the greatest impact on the Gaian system, which are most vulnerable from a human security standpoint, and which are most amenable to constructive change. In this section, I argue that, with respect to each of these questions, the world food system warrants attention. According to the UN Millennium Ecosystem Assessment, agriculture is a greater threat to biodiversity and ecosystem function than any single human activity.²⁵ To my knowledge, no other global human system is as deeply implicated in destabilizing all of the great Gaian cycles, nor is any so utterly essential to the daily sustenance of every person. Most promising, however, are the myriad benefits for both human and ecological communities, from the local to the global, of a living-systems approach to food.

Over two hundred years ago, Thomas Malthus famously predicted that population growth would eventually outpace the ability of industrial societies to feed themselves. What Malthus did not foresee was that agriculture itself would become industrialized, reliant upon heavy machinery, petrochemical inputs, the hybridization of high-yield seeds, a vast transportation infrastructure, and a highly specialized division of labor. Today's tightly networked world food system manages to feed 7 billion people. That system, however, is showing signs of stress, as is the larger Earth system of which it is a subset – and those stresses are, in many cases, mutually reinforcing. The world food system is destabilizing the great Gaian cycles even as it is utterly reliant upon them.

Prior to the modern era, most people were engaged in the growing and harvesting of food. Even up until the twentieth century, most Americans lived on farms. Today, fewer than 2 percent do, and the average age of the US farm operator is 55.²⁶ A similar demographic shift, albeit to a lesser extent, has occurred throughout the world – in developing countries, within a few

²⁴ Athanasiou and Baer 2002, 74.

²⁵ Jackson 2010, 134.

²⁶ Allen and Harris 2005, 1

decades. Today, cropland and pasture cover 37 percent of Earth's land area while most people live in cities.²⁷

Oil is the lifeblood of the world food system. The farm machinery that tills the soil, plants the seeds, and harvests the crop runs on petroleum. Virtually all of the fertilizers, pesticides, and herbicides that have increased crop yield as much as tenfold over pre-industrial yields are petroleum derivatives. The transportation network of trucks, trains, cargo ships, and airplanes that carries commodities from farm to fork, increasingly by way of processing factories, is almost entirely powered by petroleum. Small wonder, then, that food is cited as the number one source of greenhouse gas emissions, quite likely greater than transportation, domestic energy use or manufacturing.²⁸ And it is easy to see how this situation emerged: just one large spoonful of the stuff is equivalent to eight hours of manual labor.²⁹ As a species, we are now burning black gold at a rate approaching 90 million barrels per day, with a large portion of that sum being poured into the world food system.³⁰

From a living-systems perspective, our oil-dependent food system is inherently problematic on both ends. With respect to inputs, petroleum is the non-renewable resource *par excellence*, fueling the extraction of countless other non-renewables, including the gargantuan quantities of fresh water required by industrial farms. While the year when global oil production peaks before the inevitable decline will not be known for some years after the fact, "peak oil" seems to have occurred in 2006.³¹ From a Gaian perspective, dredging up fossil fuels from beneath Earth's crust and burning them introduces, in effect, geological time scales into the dynamics of the atmosphere and the biosphere. Human civilizations, including the agricultural systems upon which they were based, developed during the last 10,000 years, a period nicknamed "the sweet spot" by one climate scientist.³² Given this fact, prudence might be in order when tampering with Gaia's carbon cycle.

Even if policy responses are slow and inadequate, Gaia's carbon cycle has at least been elevated to the international political agenda. The same cannot be said of the global nitrogen cycle, although some scientists believe that it is an equally pressing problem. Human activities have more than doubled the amount of nitrogen stored in the biosphere, resulting in acidification and eutrophication of freshwater systems all over the world.³³ With approximately 80 percent of anthropogenic nitrogen emissions coming from fertilizers, meat production, and the cultivation of nitrogen-fixing legumes (primarily soy),³⁴ the primary point of intersection between human systems and Gaia's nitrogen cycle is agriculture. Unlike petroleum, however, nitrogen is not a scarce resource: it comprises most of the atmosphere, although its production is extremely energy intensive. The Gaian problem is that millions of tonnes of the stuff are being transferred from the atmosphere to the biosphere each year, with catastrophic consequences for freshwater, coastal, and forest ecosystems.

The world food system has also ramped up the tempo of the global phosphorus cycle. An essential nutrient for plants, this mineral constitutes only 0.1 percent of Earth's crust. Until the late twentieth century, the phosphorus cycle, moving from rock to soil to plant to waterway to

²⁷ Matthews and Hammond 1999, 11.

²⁸ Hertwich and Peters 2009, 6414.

²⁹ Homer-Dixon 2006.

³⁰ International Energy Agency 2011.

³¹ International Energy Agency 2010.

³² Cited in Aitken 2010, 129.

³³ Matthews and Hammond 1999, 12–19.

³⁴ Vitousek et al. 1997.

ocean to sediment, probably took millions of years to complete.³⁵ Since the advent of industrialized agriculture and modern mining technologies, prodigious quantities of phosphorus have been unearthed, making their way from mines in a handful of countries into farms and waterways throughout the world within a few years. As with nitrogen, one result is extensive eutrophication of freshwater systems. What the long-term consequences of this planetary experiment might be, it is too early to say, but clearly the experiment is underway.

A similar experiment is underway with respect to fresh water, which constitutes only 1 percent of the potable water available for the entire biosphere. With agriculture accounting for most of humanity's water consumption, the world food system comes into focus once again. Prior to the advent of industrialized agriculture, virtually all of Gaia's fresh water was replenished through the natural cycles of rainfall, evaporation, and respiration. The petroleum revolution made it possible to drain rivers and lakes and mine groundwater on an unprecedented scale – particularly in the vital farmlands of China, India, North Africa, the Middle East, and the US. The annual depletion of the immense Ogallala aquifer beneath the midwestern US, for instance, is equivalent to the annual flow of 18 Colorado Rivers.³⁶ There is little doubt that water will be a political flashpoint as the human population approaches 10 billion in the coming decades.

Petroleum, the lifeblood of the world food system, plays a key role in anthropogenic perturbations of Gaia's carbon, nitrogen, phosphorus, and water cycles. It is, moreover, an eminently non-renewable resource, and therefore likely to play a key role in triggering international food crises. That likelihood became evident in 2008, in the wake of US and EU "clean energy" initiatives that shifted millions of acres of farmland into ethanol and biodiesel production, driving up grain prices and sparking food riots in some 40 countries.³⁷ The policies were aimed at promoting energy independence and reducing greenhouse gas emissions, with little consideration for the agricultural consequences beyond farm subsidies. But from a systemic perspective, the crisis was no surprise. A host of systemically linked factors, from World Trade Organization agricultural policies to urbanization, have rendered many developing countries highly dependent upon grain imports. What *was* surprising was how *quickly* events unfolded, an indication of how tightly networked the world food system has become. Yet in the aftermath of the 2008 crisis, virtually no institutional responses were implemented to prevent similar crises in the future.

The picture, however, is not altogether gloomy. If agriculture is the *primary point of intersection* between human systems and Gaia, then it may also be the *best point of intervention*. Because the world food system is implicated in destabilizing all of the great planetary cycles, eating itself is a Gaian action. The task at hand is to transform the world food system into a viable subset of Gaia, which means approaching it as a holistic and autopoietic living system rooted in symbiotic networks. This is a tall order, no doubt, but evidence from food movements around the world reveals that it is already happening. School gardens, farmers markets, slow food enclaves, fair trade initiatives – all of these speak to a growing dissatisfaction with the industrialized food system. As we saw earlier, the key to sustainability is thinking in circles, and this is precisely what the new food politics is about: linking human and biotic communities

³⁵ Carpenter and Bennett 2002.

³⁶ Harwood 2010, 151–3.

³⁷ For an analysis of the crisis, including the complicating role of speculation and a handful of weather-related crop failures, see Clapp and Cohen 2009. Ironically, because of the central role of petroleum at every stage in the biofuels commodity chain, especially corn-based ethanol, its energy balance may be negative. See Weis 2009.

together in virtuous cycles of exchange. From urban farms in Detroit to seed-saving movements in India, support is growing for regenerative food systems that nourish both people and ecosystems.

Organic farmers in particular can be considered entrepreneurs of symbiogenesis, forging generative networks with bees, earthworms, and a host of beneficial insects, nematodes and microorganisms – to say nothing of their customers. Despite the rapid spread of a few genetically modified crops, organics are by far the fastest growing agricultural sector in the industrialized world. Even if large-scale organic farming remains reliant upon petroleum-based machinery and transportation, it at least takes the crucial first step of approaching soil as a living system rather than an inert receptacle for chemical inputs. Compost is, in many ways, the epitome of the virtuous cycle: transforming waste into fertility. Beyond compost, the organics movement is a hotbed of experimentation in virtuous cycles ranging from rainwater harvesting, to perennial agriculture and forest gardens, to effective micro-organisms.³⁸

The overarching principle that informs these diverse practices is that agriculture must be approached as a living system.³⁹ In contrast to the linear economic model that propels matter from resource extraction to production to consumption to waste, the new food economy is situated in a vibrant web of generative networks. And this generativity is not simply a biological phenomenon, it is a deeply political and ethical one, for while the linear economic model excels in economic efficiency, its human repercussions can be as devastating as its ecological ones. In the new food politics, human health, social justice, and ecological sustainability are integrally connected.

Eating (and promoting) local, organic food is a big step towards weaning ourselves from the petroleum economy, but agriculture can be far more proactive on a Gaian scale. Consider, for instance, the Botanical Ark, an Australian farm that specializes in integrating endangered species into the world food system. Similarly, the potential for carbon sequestration in soils, which contain over twice as much carbon as the atmosphere, is largely untapped.⁴⁰ This would require a Gaian understanding of soil as a living web of symbiotic networks rather than an inert receptacle for chemical inputs. Or, rather than tearing into Earth's crust for scarce phosphorus, we might make the alchemical transformation of "waste-to-wealth" by mining the prodigious quantities of manure generated by poultry farms for this precious fertilizer.⁴¹ When the governing metaphor for our earthly existence shifts from machine to organism, any number of creative possibilities are unleashed for rethinking our place in Gaia's great food webs.

Is the Earth system, however, too immense and scientific knowledge about it too abstract to command popular interest? As biologist Tyler Volk observes, we all have a personal relationship with Gaia whether we like it or not:

With our breaths, our food intake, and our waste ejection, we participate in food webs and in the great life-supporting, global biogeochemical cycles that link us to the upper reaches of the atmosphere, to the deepest cold reaches of the ocean, to the dark, pungent places in the soil, as well as to every creature with which we cohabit all the corners of the biosphere.⁴²

³⁸ Frey 2011.

³⁹ McNeil and Winiwarter 2004.

⁴⁰ FAO 2004, 3.

⁴¹ Science News 2009.

⁴² Volk 2009, 35.

For some (perhaps many, as the popular response to Lovelock's work suggests), this grand integrative science-based vision can serve as a source of personal meaning and purpose. For others who require something more mundane, more immediate and visceral, food is a palpable place of contact between self and world. If the transition to a sustainable world requires linking person to planet, then food serves as the ideal medium for doing so. No wonder, then, that food has become such a powerful galvanizing force in the world today.

At the level of institutions and policy, where might a Gaian approach to the world food system lead us? On a very basic level, a living-systems approach to agriculture would generate a radical rethinking of government subsidies, research and development priorities, and agricultural education. Policies would promote farming in close proximity to human habitations: in cities, schools, prisons, and so on. Internationally, a Gaian approach to agriculture would spark a redesign of trade, aid, and development programs to promote basic food self-sufficiency everywhere, including a careful resorting of the local and the global.

Food may be the weakest link in between human systems and Gaia but, for both practical and existential reasons, it may also be the best point of intervention for harmonizing our lives with our home planet. If we are to inhabit a planetary network of food webs and biogeochemical cycles, then we need to learn to think like Gaia. This means that we must learn to ask, both physically and metaphorically, what is feeding us and what we are feeding.

In a time when fear and despair threaten our capacity for constructive action, Gaia can serve as a source of faith, humility, and inspiration, reminding us that we are an integral part – and an astonishing result – of an unfolding evolutionary process. The linear economic model may well be at the end of its tether, but Gaia theory calls us back from our isolation and despair, connecting us to the wondrous whole of creation and calling us to a greater sense of responsibility. We are a species with the same bacterial ancestry as all other species, yet we may also be the means by which Gaia is growing into self-awareness. Gaia theory at once revives an ancient symbol and endows it with scientific legitimacy, synthesizing empiricism with poetic inspiration. If affect precedes cognition, as psychologists suggest, then the emotive and symbolic resonance of Gaia theory may be as significant as its pragmatic contributions to sustainability.

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33 After nature: environmental politics in a postmodern age

Paul Wapner

Environmentalism has been called the “most enduring and important social movement of the twentieth century.”¹ It has mobilized activists on all continents, won worldwide public support, convinced most states to establish environmental ministries, and facilitated the signing of over 500 international environmental treaties. As the new century continues to unfold, it is worth asking about environmentalism’s staying power. How relevant will environmentalism be in the twenty-first century? Will it continue to excite and mobilize people throughout the world and translate that energy into significant political change?

There are, of course, no simple answers to these questions. Environmentalism is a multifaceted movement operating in a complex world, so its future trajectory will always be a function of many elements. Part of its prospects, however, rests on how well it can anticipate and respond to changing socio-historical conditions. All social movements wither or thrive depending on their ability to speak meaningfully to people’s concerns about contemporary, public issues. Environmentalism is no exception. Can it speak to changing socio-historical conditions and widespread public concerns of the twenty-first century?

Environmentalism has a relatively strong track record of twisting and turning with the times. Indeed, its very roots in the late 1800s and early 1900s lie in intellectual and political responses to a profound set of changes associated with industrialization. As the industrial revolution gained momentum and magnitude, proto-environmentalists such as William Wordsworth, William Blake, Ralph Waldo Emerson and Henry David Thoreau worried aloud about the incipient loss of pastoral and wild landscapes and simpler ways of life threatened by industrialization. Their intellectual descendents, people such as George Perkins Marsh and John Muir, wove such concern into a moral and cultural critique of industrialization that resonated with many and essentially started the environmental movement. From a different corner, early environmentalists such as Gefford Pinchot and Alexander von Humbolt translated this critique into a scientific discourse of conservation aimed at directing industrialization’s largely unmindful and rapid use of resources.² Both orientations developed evocative and consequential language to highlight the stakes of industrialization and provided interpretive frameworks that resonated with broad public sensibilities. Environmentalism, in short, cut its teeth on providing meaningful responses to industrialization. Its long-term prospects rest on its ability to do the same in the face of future socio-historical changes.

Environmentalism responded throughout the twentieth century to a host of challenges that had to do with both the substance and scope of environmental concerns. Up until the late 1960s, environmentalists organized themselves around, and focused upon, domestic politics. They worked within national boundaries and sought to protect the quality of air, water, soil and species within those domains. This made much sense because what little environmental

¹ Thiele 1999, xii.

² Guha 1999; and Shabecoff 2003.

legislation existed during this time tended to be domestic, as indeed the architecture of global governance was in its infancy.³ In the 1970s and 1980s, this changed dramatically. With the emergence of transboundary environmental issues – such as ozone depletion, long-range air pollution, expansive oil spills, and nuclear testing – it became increasingly clear that a single country could not protect its environment unless it was willing to engage and cooperate with others. Air, water, shifting soil, migratory animals and the like ignored national boundaries and thus environmentalists needed to expand their base of support and operations transnationally to remain relevant and effective in a globalizing, ecological age. Environmentalists successfully adjusted to this world as they set-up shop in and coordinated activities across multiple countries. Greenpeace, Earth Island Institute, Rainforest Action Network, World Wildlife Fund and Conservation International emerged along with others as transnational environmental activist groups working to protect environmental quality the world over.

Environmentalism responded to changing conditions in a different way when it was confronted with the challenge of protecting ecosystems in the global South. While environmental groups extended themselves across national boundaries throughout the 1970s and 1980s, most had headquarters in the North and focused on issues of concern to northern citizens. This meant that much of their international work focused on protecting spectacular landscapes and biological diversity in the South while ignoring the plight of the South's people. Throughout the 1980s, environmentalists realized the folly of such a narrow agenda as they saw many of their conservation efforts come to naught. It became increasingly clear that environmental groups could not save wildlife, biologically rich areas and stunning landscapes in the South unless they also worked to help citizens in the South prosper economically and enjoy the fruits of socioeconomic development.⁴ Moreover, the global South grew increasingly more vocal during the 1980s with regard to global environmental affairs as it recognized how many international environmental actions threatened to stymie its own development plans. Environmentalists responded to these challenges by taking social justice and economic issues more seriously and, in turn, helped to fashion the notion of sustainable development. Embracing sustainable development has been crucial for environmentalism to retain its contemporary relevance.

To be sure, environmentalists did not surmount the above challenges with ease, and parts of these challenges obviously continue to confront environmentalists. Moreover, environmentalists probably missed many opportunities to respond to and capitalize on changing socio-historical conditions. Nonetheless, the movement's ability to recognize, address and engage large-scale, socio-historical change helps explain its staying power and significance through the last century. Can it continue this track record into the future?

Challenges of the New Century: Crowding Out Nature

Environmentalism faces a number of new challenges that have been building over the past century but whose authentic character is only recently emerging. Two, in particular, stand out as premier tests of environmentalism's continued relevance. These challenges are, admittedly, abstract and may not strike the reader as particularly urgent or even palpable in the contemporary landscape of environmental politics. Nonetheless, as I hope to show, they rumble under the

³ There were, of course, numerous international organizations before this time and these constituted a significant degree of international governance see, for example, Murphy 1997. Nonetheless, as Boli and Thomas 1999 make clear, the real growth years for global governance took place from the 1970s on.

⁴ Wapner 1996.

surface of every environmental issue and the ways environmentalism responds to them will set much of the agenda for environmental activism over the course of the present century.

The first challenge has to do with the extensive and intensive footprint (or, as Irvine⁵ likes to say, “bootprint”) of humanity on the earth. People have always exerted an ecological presence on the planet. Studies show that the earliest farmers in ancient Mesopotamia used forms of agriculture that led to salinization of the soil and humans have continued to affect adversely the earth’s ecosystems since then.⁶ The difference today is that, while earlier peoples exerted influence on only parts of the earth, now humanity has left its signature everywhere. By, for example, rerouting rivers, emptying out mountains, deforesting large tracts of land, pumping chemicals into the air, polluting the oceans, and decimating the vast diversity of the earth’s species, humans have, as McNeill⁷ makes clear, penetrated the lithosphere, pedosphere, atmosphere, hydrosphere and biosphere.

Take the oceans, for instance. For centuries the oceans were seen as vast expanses against which humanity seemed puny and certainly powerless to exploit. Humans could navigate the oceans and steal fish, whales and other creatures from their waters. But, for most of history, humans barely skimmed the surface, as it were. This changed with the advent of steam-powered factory ships in the seventeenth century and again in the nineteenth century with the introduction of trawlers and, later, drift, sine and bag-shaped trawl nets in the twentieth century. At the end of the last century, these technologies took another qualitative leap as sonar, underwater video cameras, and geographic information systems became part of the fishing enterprise. These have allowed ocean trawlers, for example, to drag their nets across every part of the North Sea once per year⁸ and, more generally, to deplete the oceans of fish such that the United Nations was able to claim that, by the late 1990s, three-quarters of global fishery stocks were overfished or fully exploited.⁹ While the deepest depths of the oceans still remain relatively free from human activity, our reach into and across the oceans extends far, deep and wide.

Human reach goes beyond the oceans. It extends greatly into the earth’s landmasses and into the habitats of almost all creatures. This has made humanity not simply another species in a vast evolutionary process but actual governors of the process itself. Paleontologists tell us that, according to the fossil record, there have been five great extinctions in the geological past. The last one was roughly 64 million years ago when the dinosaurs disappeared. According to conservation biologists, we are now in the midst of the sixth great extinction and this time we know the cause is not an asteroid hitting the earth or some other cosmological event. Today, humans are destroying diverse habitats, hunting untold species, and otherwise compromising the ability of creatures to live on earth to such an extent that close to 100 species are disappearing every day and roughly one-quarter to one-third of all species will go extinct within the next 50 years.¹⁰ This diminishment has already reduced the variety of genetic diversity among species such that the evolutionary process itself has been undermined. According to Michael Soule, due to human action “significant evolutionary change in most higher organisms is coming to a screeching halt.”¹¹ Put differently, we have extended our reach

⁵ Irvine 2002.

⁶ Hughes 1975.

⁷ McNeill 2001.

⁸ McKibben 1998.

⁹ UNEP 2002.

¹⁰ Wilson 2003, 102.

¹¹ Quoted in Thiele 1999, 48–9.

so deeply into the plant and animal worlds that we have essentially taken over the reins of evolution.

Humans have also, as is well known, changed the skies. The planet possesses a stratospheric ozone layer that protects living entities from harmful ultraviolet radiation. For millennia, the constitution of the ozone layer remained fairly constant. This changed in the 1930s with the invention of chlorofluorocarbons (CFCs) and the increasingly widespread use of other ozone-depleting substances (ODS). By the 1990s, ozone levels had fallen so much that skin cancer and cataract rates in humans had gone up, phytoplankton (which are part of the backbone of the marine food chain and provide significant amounts of oxygen for the earth) showed signs of reduction, and susceptible animals such as certain species of frogs showed signs of deformation or disappeared from the earth altogether.¹² Although the 1987 Montreal Protocol and its subsequent amendments have significantly curbed the production of ODS, the threat still exists and a human signature on the constitution of the ozone layer will remain for decades.

These conditions are, of course, well known. Most of us are familiar with the litany of environmental problems. I rehearse some of that litany here not to provide new details but to frame environmentally harmful actions in a way that we can appreciate how they are fashioning a new set of challenges for environmentalism. Environmentalists have long worried about the threats pollution, loss of biological diversity, and so forth pose for humans and other creatures. Traditional environmentalism, however, always assumed that the nonhuman world formed a benchmark against which one could measure degradation and stand as a domain of what the earth is like without human influence. Our steady encroachment and indeed colonization of the air, water, soil and species is removing that vestige of environmental insight. Bill McKibben¹³ famously referred to this loss as the “end of nature.” He claimed that we have empirically erased the divide between the human and nonhuman worlds by making so many inroads into nature that we must abandon the whole idea of a self-willed, other-than-human world. Crossing this divide is a profound historical event and offers a significant challenge to environmentalism.

The profundity, however, goes deeper. As McKibben and others talk about the “end of nature,” they provide a linear narrative. They explain how humans have increasingly encroached upon nature’s domain and how, eventually, the circumscriptions became so narrow that there is now no longer anything we can comfortably call “natural” or “nature.” Implicit in this narrative is that we can one day pull back from encroachment and resurrect nature. That is, one day nature may regain a foothold if we sufficiently withhold our powers of intervention and stop trespassing. Crowding out nature, however, is only one part of the problem. Recent advancements in biotechnology, nanotechnology, pharmacology, artificial intelligence and so forth point to a different type of colonization – one that may never be undone. Here it is not so much circumscribing nature as splicing ourselves into its very processes and, in turn, changing our own identities and nonhuman identities. Humans, animals, plants and machines are now morphing into each other so much so that the entire idea of a divide between the human and nonhuman – with the quiet hope that this divide may one day be resurrected and expanded – may be folly.

In his book, *Evolution Isn’t What It Used To Be*, Walter Anderson¹⁴ chronicles successive augmentations to the human body. From eyeglasses and hearing aids to pacemakers and

¹² See <http://www.gcrl.org/ozone/ozoneFAQs.html#m>.

¹³ McKibben 1997.

¹⁴ Anderson 1996.

artificial limbs, technologies have allowed so many of us to become part human and part machine. We see this dramatically in, for example, synthetic materials used in medicine that resemble and can ultimately bond with human bone and tissue. We see it also in dialyzers and artificial organs which perform essential biological functions. According to Anderson, these innovations are creating genuine bionic bodies. They are enabling us to engineer ourselves by designing mechanical and electrical apparatuses that can be folded into our very bodies.

The correlate to bionic bodies is organic machines. Advancements in artificial intelligence, robotics and the like blur the lines between the living and nonliving, inviting artifice into the privileged fold of the organic. Machines now move, self-design themselves, and even learn. To some, this is shifting the balance of animation. As Harraway¹⁵ puts it, "Our machines are disturbingly lively, and we frighteningly inert." As we increasingly rely on machines, they take over more of our lives – conditioning us to live according to mechanical rhythms rather than biological ones. The extreme of this is some sort of Matrix-like world in which we humans become subject to our own technical creations. The general point is that the mechanical more and more conditions the biological such that the latter is no longer a distinct realm. It is contaminated, as it were, with the artificial, and it may be impossible to pull them apart. Harraway,¹⁶ Luke¹⁷ and others reflect on the political meaning of this breach of boundaries. They all recognize, however, that the breach cannot be repaired.

On the other side of the divide, humans are increasingly melding their bodies with plants and animals. At the most basic level, humans have long domesticated various creatures and have made them part of our diets, medicines and cosmetics. The early use of insulin from cattle and pigs to treat diabetes is perhaps one of the most obvious examples of this. Such practice is now being accelerated and intensified. One sees this in the use of animal organs for human transplants and in production processes that use animals as "living factories" whose bodies produce proteins, peptides and modified amino acids to supplement human endocrine systems. In one of the more interesting interspecies medical innovations, scientists are now creating human skin replacements by combining the cells taken from the foreskins of baby boys after circumcision with purified collagen from cows. These types of procedures and advancements are erasing the boundary between nonhuman animals and people.

One of the most extensive types of such erasure is the entire field of biotechnology. Among its many variants, the effort to splice genes from one species into another to affect certain characteristics expresses one of the deepest human cuts into nature. To be sure, much biotechnology usually involves cultivating genes from one type of plant or animal and inserting them into another. Such transgenic operations include, for example, vegetables injected with salmon genes to avoid freezing and potatoes engineered to produce their own insecticide.¹⁸ While not targeting human subjects, human design is at the heart of such procedures. Bio-engineered creatures represent new species on earth whose very biophysical character reflects human fabrication. Such species are literally artifacts.

Human and animals are blending together in a different way in our efforts, ironically, to protect wildlife and restore wildlands. Historically, preserving wilderness meant drawing a boundary between human activity and natural processes, and allowing the latter to prosper free from human intervention. Wilderness areas and preserves won official designation around the

¹⁵ Harraway 1991, 153.

¹⁶ Harraway 1991.

¹⁷ Luke 1997.

¹⁸ Pollan 2001.

world and are supposed to be guarded from sustained human activity. In fact, the US Wilderness Act defines wilderness as an area “untrammeled by man [sic], where man [sic] himself is a visitor who does not remain.”¹⁹ Over the past few decades, this has changed dramatically. Wilderness areas may still look like untamed or unconquered territories but this is far from the case. So-called wild animals such as cougars, bald eagles, tigers and rhinoceros now typically wear radio collars that allow biologists and wildlife management officials to track their movements and design protective measures. Likewise, whole populations of animals are moved about to sustain certain species and keep particular ecosystems vibrant. The introduction of the grey wolf into Wyoming or moose into Michigan represents examples of human management of wildlife. A further example is the prescribed burns that fire engineers undertake to mimic nature’s rhythms in efforts to manage wildlife.²⁰

Wilderness protection is not simply a matter of maintaining certain landscapes or animals; it often includes restoration in the sense of reclaiming ecological conditions before the onslaught of human intervention. The idea is to peel back human influence – by, for example, removing non-native species or reintroducing long-gone but once native creatures. Recreating such conditions, however, is a complicated feat. What is the benchmark for doing so? In North America, for instance, many point to the pre-Columbian age as the ideal. This makes sense in that the North American landscape changed dramatically with the arrival of European settlers, an event which ignited the huge environmental changes we see today. But, were pre-Columbian times devoid of human influence? Crosby²¹ and others point out how human migration, a process that has been going on for millennia, fundamentally shaped ecological conditions throughout the world, including North America. Other scholars point out how Native Americans, long seen as mindful stewards of the land, used agricultural and hunting methods that radically shaped the North American environment.²² How far back, then, must one go to restore a given landscape? Can one go *way* back, before humans? How reliable are our records for such a time and what would it mean to try to recreate such places when many of the key plants and animals of that time are now extinct? By any measure, excising human influence is a seemingly impossible task given the layers of history laid upon the landscape²³ and the irreversible changes that have occurred. More problematic and more significant, however, is the simple point that ecological restoration can never mean pulling back from nature and letting it do *its* thing – re-establish its so-called “natural” conditions before human intervention. Any effort to do that obviously entails sustained and intense human involvement and management – something that takes away from the idea of wildlands in the first place.²⁴ Such considerations raise the question of “nature” more generally.

McKibben²⁵ argued that the most obvious example of the “end of nature” is anthropogenic climate change. By increasing greenhouse gases, humans have altered temperatures, seasons and weather patterns, and these in turn affect the living conditions of all creatures. The kind of food animals eat, the amount of moisture forests produce and benefit from, and the levels of atmospheric carbon that vegetation absorbs – all of these are subject to climate change.

¹⁹ Wilderness Act 1964, Sec. 2 c.

²⁰ For reflections on “nature” and the concept of nature, see Callicott and Nelson 1998.

²¹ Crosby 1993.

²² Cronon 2003.

²³ Schama 1995.

²⁴ Baldwin et al. 1994.

²⁵ McKibben 1997.

McKibben takes the insight further by pointing out that anthropogenic climate change greatly minimizes nature's foothold in the world. One can no longer wake up in the morning, for instance, and comment on what a beautiful day the world has given us; one must now note that we have partially manufactured its quality.

The "end of nature" challenges environmentalism. If there are no pristine landscapes left, genuine wilderness areas around, or spaces devoid of human signature, what does it mean to protect nature? How can a movement, dedicated to bringing human activities more in line with the natural world (by being mindful of the earth's biophysical limitations and committed to harmonizing human life with, rather than imposing it upon, nature) orient itself in nature's absence? Put differently, the "end of nature" suggests that humans have finally extinguished all remnants of the natural world and that, when we look at nature these days, we are not looking at a self-willed realm that operates independently of human beings but are largely gazing into a mirror. How can we reclaim, harmonize, respect or love nature – orientations environmentalism has long preached – if we cannot find any genuine instances of it? Answering these kinds of questions must be on environmentalism's agenda in the coming years.

Challenges of the New Century: No More Natures

Many environmentalists lament the "end of nature" and see themselves working to bring nature back. Doing so may be hard – in fact, impossible – but the ideal of doing so still sits squarely in the mind's eye of many environmentalists and motivates much of the movement. Nature may be a distant dream, something only to be approximated, but it nevertheless still exists on some level. As such, it can serve as a guidepost against which to measure human prowess, model human communities in relation to, or otherwise simply respect as a realm beyond human life.²⁶ Put differently, nature's physical space may have shrunk over time to the point of disappearing altogether but this does not mean that the concept is worthless. There is more in the universe than human beings and, although we have imprinted ourselves onto much of this, we have always used the word "nature" to depict that otherness. Maintaining the conceptual status of the other-than-human is seemingly crucial for environmentalism and any attempt to confront the "end of nature" challenge will seemingly need to sustain this status in its response. This becomes difficult given the second challenge of the new century, namely, the postmodern critique of "nature" itself.

Over the past few years, postmodern scholars have enjoyed pointing out that the disappearance of nature is not the result of a steady encroachment on the nonhuman world. That is, nature's demise is not a historical event or a new phenomenon; in fact, it is not an event or phenomenon at all. "Nature," as it were, *never* existed in the sense of being a self-subsisting entity with a character independent of human beings. Rather, "nature" has always been a human idea; it is a concept with which we encounter the nonhuman world. "Nature," in other words, is a social entity that assumes meaning within various cultural contexts and is fundamentally unknowable except as a social construct. It is not something "out there" that the mind discovers but rather something the mind constructs. "Nature" thus cannot serve as an ideal to which environmentalists can appeal or a ground against which to gauge human enterprise. "Nature" is a concept that has been invested across time and place with multiple meanings and is thus fundamentally contested. We have not reached the end of nature; there was never any "nature" in the first place.

²⁶ Soule and Piper 1992; and McDonough and Braungart 2002.

The postmodern critique of “nature” comes up all the time in environmental politics. One of the consistent mishaps in environmental affairs is the assumption that all parties concerned with climate change, loss of biological diversity, ocean pollution, and so forth share the same understanding of the problem. To take the most obvious example: many northern states and nongovernmental organizations work on behalf of wilderness preservation and biological diversity in the developing world. Yet, many in the developing world argue that one person’s wilderness is another person’s home, and that what is a valued endangered species to some is a threat, potential income or dinner to another.²⁷ “Nature,” as such, is not a single realm with a universalized meaning, but an ideational canvas on which people project sensibilities, cultural attributes, economic conditions and social necessities.²⁸ Postmodernists are quick to point this out when, in the midst of conversations about “nature,” they ask whose concept one has in mind.

Conventional understandings distinguish “nature” from “convention.” The roots for doing so lie in the ancient distinction between *physis* (nature) and *nomos* (law or custom) – in which the former is unconnected to any consciously purposeful activity – and thus fundamentally independent of human agency – while the latter is a product of human thought and purpose.²⁹ Today, we generally make the same distinction between nature and culture. The boundary between these concepts, however, has always been difficult to locate, for humans never come to know nature in any direct perceptual manner but always through certain cultural or social categories of understanding. As Steven Vogel³⁰ puts it, humans “can have no access to anything like a pre-social nature in itself; the very idea is incoherent, because all access is socially mediated.” Our categories for understanding nature, in other words, are social through and through, and thus “nature” is not separate from human life but part and parcel of it. It is an institution much the way our collective understandings of any shared idea are. Thus, postmodernists see the human–nature divide not as something that shrinks or grows over time or place; the divide itself simply does not exist.

To say that the dichotomy between nature and humans does not exist is not to deny the reality of things other than human beings. Postmodernists recognize that there is a fundamental substratum of materiality in the world; they are not philosophical idealists in this sense.³¹ Social construction, for postmodernists, only becomes an issue when it involves people interpreting material reality – something people do all the time. People understand the world through narrative or discourses. Narratives are ways of talking that emerge in, and have an effect on, social context. They come about through people talking with each other and express themselves as socialization forces that organize human experience. For postmodernists, people can never escape interpretation via narrative; indeed, we are always interpreting things in terms of *some* narrative. Our conceptions of “nature” are no exception.

We know this through studies that show how the idea of “nature” varies between cultures and historical periods. Social and cultural anthropologists show the changing meaning of “nature” across space as they point out cross-cultural variations of the concept of “nature.”³² Environmental historians highlight the changing meanings of “nature” across time. Nash,³³

²⁷ Terborgh 1999; and Agarwal et al. 2002.

²⁸ Schama 1995.

²⁹ Torrance 1999b.

³⁰ Vogel 1996, 1997.

³¹ Rorty 1989.

³² Ellen and Fukui 1996.

³³ Nash 1989.

Oelschlaeger,³⁴ and Callicott and Nelson³⁵ chart how the meaning of wilderness, often a stand-in for “nature” itself, has shifted within the US over the decades. Literary critics and philosophers do a little bit of both as they catalogue widely different interpretations of “nature” throughout history and across cultures.³⁶ Scholars of international relations similarly show how the meaning of specific transnational environmental issues change at the hands of “knowledge brokers,”³⁷ research institutes,³⁸ epistemic communities³⁹ and environmental activists,⁴⁰ and how these changes, which often turn on contested meanings of “nature,” motivate international action. “Nature,” as these authors of various disciplines demonstrate, is not simply a material substratum whose essential character we glean from study and observation, but rather is a repository for meaning. For this reason, it has meant and still means a host of different things to different peoples. As Raymond Williams⁴¹ has observed, “The idea of nature contains, though often unnoticed, an extraordinary amount of human history.”

The postmodern critique of “nature” may seem overly abstract, dreamed up in the ivory towers of academia and thus fuel for theoretical debate but unimportant to the real world of politics. Were it so! Many anti-environmentalists have found the idea quite attractive and have used it to argue for loosening environmental regulations and attacking environmentalism in general. People like Rubin⁴² and Chase,⁴³ for example, argue that, since there is no authentic, unproblematic entity called “nature,” we need not treat the nonhuman world with any special kind of respect or follow dictates of policies based on understandings of preserving “nature.” In contrast to the appeals of environmentalists, Rubin and others maintain that trees, animals, canyons and rivers are just like anything else in the world – ontologically equivalent to all other entities – and thus we can preserve or exploit them as we see fit. At the extreme, this view can justify paving rainforests, wiping out the last pandas, or pumping high levels of carbon dioxide into the atmosphere. For, if the only things preventing us from doing so are our own interests, desires, beliefs or values, and these differ depending on who is expressing them, then there are always going to be justified arguments for ignoring environmental protection efforts.

Environmentalists should take postmodern eco-criticism seriously. Postmodern sensibilities increasingly pervade popular culture and, as more people recognize the weak ontological foundations of “nature” protection, environmentalists need a persuasive form of response. This will not be easy. Environmentalism has always cherished the idea of “nature.” One of environmentalism’s dearest slogans is, “Nature bats last.” This means that no matter what human beings do, sooner or later the laws of nature will express themselves and take precedence over human activity. Thus, humans can build houses in flood plains, pump excessive amount of toxins into the air, or wipe out species in inordinate numbers. At some point, however, nature will bite back. Nature, which sets the biophysical parameters for life and operates according to unbending laws, will exert itself. Environmentalists have always respected this profound otherness of nature. To them, nature’s ways are matters of necessity. They will take place

³⁴ Oelschlaeger 1991.

³⁵ Callicott and Nelson 1998.

³⁶ See, for example, Glacken 1967; Evernden 1992; McLuhan 1994; and Torrance 1999a.

³⁷ Litfin 1994.

³⁸ Luke 1997.

³⁹ Haas 1992.

⁴⁰ Wapner 2002.

⁴¹ Quoted in Harvey 1996.

⁴² Rubin 1994.

⁴³ Chase 2001.

whether one likes them or not. Environmentalists have fashioned a politics around respecting nature's power and otherness. They call on humans to harmonize themselves with nature's imperatives or to suffer the consequences. Moreover, they advocate a type of respect and even love of nature, given how different it seems from human life. What does a postmodern sensibility do to this longstanding commitment? Can environmentalism continue to advocate for nature if "nature" does not really exist? What does it mean to protect, preserve and care for "nature" if the very meaning of the term is contested?

The "end of nature" argument suggests that we know what nature is and the real questions involve what human beings are and what they can be. Can humans be persuaded to change their ways and pull back from colonizing successive realms of the nonhuman world? Can they be taught humility and respect for the other? Is it possible for people to withhold themselves from imprinting their signature on the planet? As if these were not difficult questions and political challenges in themselves, postmodern eco-criticism problematizes the other side of the coin. It questions the identity of "nature" itself. It assumes that people know neither human nature nor nature's "nature" and this makes environmental practice quite difficult. The postmodern critique gets rid of nature on all sides and thus leaves us ontologically floating, forever denied a mooring to secure our evaluations, understandings and actions. As I see it, this poses significant challenges to environmentalism.

Environmentalism after Nature

Scholars of global environmental politics must have an interest in the state of environmentalism. Environmentalism represents the great hope for protecting the biophysical quality of life on earth and it is almost a duty for scholars to make sure that it focuses on the most significant issues, conceptualizes its work accurately, inserts itself into political dynamics most effectively, and anticipates future challenges. As Wolin⁴⁴ has said of political theorists in general, the role of the scholar is partially to post warnings. In this chapter I have tried to underline important changes – both empirical and intellectual – that are afoot and that will deeply affect environmentalism's prospects. I see this chapter as an exercise in posting warnings.

As I mentioned in the beginning, the changes outlined in this chapter are happening below the radar screen of most environmentalists and popular culture in general. Yet, they will not remain there for long. Both sets of changes are difficult to dismiss and have profound implications for environmental thought and practice. As I see it, it is only a matter of time until people all over begin to see humanity's dramatic imprint on all domains of the nonhuman world and understand the weak ontological foundations on which traditionally environmentalism rests. When this happens, environmentalism's ability to play a meaningful political role will be, even more, open to question.

While the warnings I post may be future oriented, adjusting to them may not simply be a matter of staying current with the times. It may also answer some of environmentalism's most longstanding dilemmas. Traditional environmentalism takes the human/nature distinction as a given. Debates about conservation versus preservation, anthropocentrism versus biocentrism, technological optimism versus technophobia, people versus nature, and so on have all assumed the distinction and have tried to negotiate it as best they could. There is some evidence that it has not been able to do so very successfully. While environmentalism has galvanized widespread concern and action, and was arguably the most important social movement of the

⁴⁴ Wolin 1960.

last century, it is clear that environmentalism has not realized its full potential. There has always been a sense in which all the enthusiasm, concern and otherwise significant action on behalf of environmentalism has not translated into levels of mobilization or large-scale reorientation of global politics to address successfully the most significant assaults that have been, and are currently being, waged on the earth. Put differently, while the spirit of environmentalism has infiltrated many domains around the world and has animated untold numbers of people, environmental quality itself remains elusive for many of the most troubling problems. Perhaps – just perhaps – one of the reasons for environmentalism's limited reach has to do with the distinction it makes between humans and nature.

Environmentalism has always seen environmental harm as a matter of violation. The nonhuman world has a way about it and human intervention is often seen as throwing off the balance or at least the character of nature. The distinction has led to a longstanding polarization that may be an obstacle to imagining effective political programs. At a minimum, it has made it difficult to imagine practices that combine environmental and social agendas. The human/nature divide that has undergirded environmentalism for so long, however, has remained invisible to most observers and practitioners. It has been more assumed and undertheorized than justifiably expounded. We are moving into times when this can no longer be the case. Soon, environmentalists will not have the luxury of reflecting passively on the meaning of the divide as it will become obviously clear that there is no distinction upon which to reflect.

Environmentalism can remain one of the most enduring social movements in the new century. Its ability to do so rests on how well it can make meaningful sense of contemporary challenges and, ironically, how well it can use those challenges to reflect upon its deepest commitments and understandings. My purpose in this chapter is to question the evolving character of environmentalism as it moves into a post-nature age. How can environmentalism make itself relevant after nature?

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34 Knowledge, power and global environmental policy

Marc Williams

At the beginning of the twenty-first century interest in environmental issues commands the attention of governments, business leaders, citizen-based groups, academics, and the wider general public. Knowledge is an important tool in the search for improved environmental governance. Knowledge has a number of dimensions and includes instruction, learning, information, and authorized belief. At base knowledge is concerned with the production of truth and with accurate representations of reality. The policy-making literature focuses attention on the generation, transmission and use of knowledge¹ and at each stage of this process knowledge claims can be highly contested.

It is widely accepted that modern global environmental challenges are characterized by uncertainty, irreversibility, and uniqueness or non-substitutability.² And, it is the first of these three features that directs attention to the role of knowledge in environmental policy-making. Whether we are concerned with biodiversity, climate change, hazardous and toxic wastes, or desertification, the role of knowledge becomes an important consideration. There are, of course, many factors that account for the success or failure of international efforts to halt or reverse environmental decline but it is widely accepted that knowledge plays an important role in the policy process. Furthermore, debates in society about how to respond to environmental degradation, for example, what forms of conservation or preservation are required are shaped by conceptions of knowledge. In the absence of a single truth about the human/nature interface³ competing conceptions abound concerning appropriate policy responses.

Although knowledge is not the sole factor determining environmental policy this chapter will demonstrate that it is an important aspect of environmental governance. I argue that knowledge can be seen to impact on global environmental governance in two ways. First, knowledge is an important component in the framing or construction of problems. Second, knowledge is crucial in determining solutions to the problems uncovered.

Power, Interests and Knowledge

Environmental policy-making is dependent on reliable and accurate information. In the absence of empirical knowledge, theoretical analysis and appropriate methodologies, decision-makers would be incapable of making decisions concerning complex problems. However, policy-making should not be conceived solely in terms of problem solving with knowledge perceived as an objective and neutral input into the decisional process. Instead, knowledge should be seen as an integral structure of world politics.⁴ In this sense knowledge is not only an input but also a set of conditions that enables some actions and curtails others. This section, therefore, examines the intersection of power and knowledge in the making of environmental policy.

¹ Ascher et al. 2010.

² Pearce 1990, 366.

³ Pepper 1996.

⁴ Paterson 2000, 40.

Knowledge as Discursive Power

The dominant approach to environmental policy-making is to present it as one in which the application of scientific or economic analysis will reveal uncontested truths. Knowledge represents scientific certainty, and comprises testable propositions. In other words, knowledge is an external input into a rational decision-making process that maximizes choice and optimizes returns.⁵ This approach to knowledge underpins Goldstein and Keohane's distinction between causal beliefs, principled beliefs, and worldviews in their discussion of ideas in international relations.⁶ Causal beliefs refer to the derivation of causation between variables; principled beliefs refer to a normative commitment to specific policies; and worldviews refer to an overall theoretical (or ideological) position. This separation neglects the linkages between the three components and disavows the role of ideology in the construction of knowledge. As a result such arguments omit the contestation surrounding environmental policy-making. It is assumed that new (good) ideas will drive out bad (old) ideas. The political sociology of this transformation is never made explicit. However, since the publication of Thomas Kuhn's *Structure of Scientific Revolutions* (1970) it has been widely accepted that science does not follow this simple path. Nevertheless, despite awareness of the work of Kuhn, Lakatos, and others⁷ the model presented in the dominant political science literature is one of a logic of discovery.⁸ Woods correctly observes, "the problem with the 'logic of discovery' answer is that it assumes that ideas change when new, better ideas are discovered. This offers no explanation for theories that have been around a long time and which suddenly come into fashion (such as neoliberal ideas)."⁹ Furthermore, it does not explain why despite similar circumstances public authorities may opt for different ideas.

Instead of maintaining this separation between knowledge and power some analysts emphasize the interrelation of power, knowledge, and interests through a focus on the concept of discourse. Discourses constitute ways of specifying knowledge and truth. In other words, knowledge is institutionalized through the creation of discourse, a "conceptual terrain in which knowledge is formed and produced."¹⁰ The rules and practices surrounding discourse delimit and define the legitimate mode of thought and perception of the thinker; one therefore cannot think outside a limited field of knowledge. Thus external forms of knowledge are dominated by being excluded. In short, "to know involves acts of power."¹¹ Discourse determines ways of doing things through which the real is given shape by those who conceptualize and manage it. Within environmental policy-making neoclassical economics has assumed a privileged position. In the next subsection I examine the discursive power of neoclassical economics in delimiting the terrain of policy-making in the reduction of greenhouse gas emissions.

Framing Solutions to Climate Change: The Discursive Power of Neoclassical Economics

Conflict over the role of knowledge is a constitutive practice of all aspects of the climate change debate. In other words, knowledge is internal and not external to the construction, development, and resolution of problems arising from the impacts of climate change. The ways in which climate

⁵ Simon 1997, 78.

⁶ Goldstein and Keohane 1993.

⁷ See, for example, Lakatos and Musgrave 1970.

⁸ Woods 1995, 167.

⁹ Woods 1995, 168.

¹⁰ Foucault 1981, 48.

¹¹ Hobart 1993, 9.

change issues are currently constructed and negotiated reflects a specific global distribution of power, and central to this distribution of power is a global knowledge structure. In this subsection I am specifically concerned with one policy issue raised in relation to climate change. In examining the dominance of market-based mechanisms as a solution to carbon-intensive production I do not mean to suggest that such mechanisms are doomed to fail. Rather, my aim is to illustrate the point made above concerning the links between knowledge and power.

While a number of critiques of market-based approaches to addressing climate change have emerged¹² these alternative views have faced a difficult task in gaining the attention of policy-makers. One reason for the dominance of market-based solutions arises from the initial construction of the challenge of climate change. An influential source notes that “climate change is the greatest market failure the world has ever seen.”¹³ This position is supported by other influential reports. A review commissioned by the Australian government concluded that market-based mechanisms were the most effective means for not only mitigating the issue of climate change domestically and internationally, but adaptation to the impacts of climate change as well, since “markets provide the most immediate and well-established avenue.”¹⁴ This dominant orthodoxy is endorsed by business leaders. The leading global business association concerned with sustainable development asserts that market-based financial mechanisms can act as incentives for reducing environmental degradation, creating an “open, competitive and rightly-framed international market.”¹⁵ Thus serious political contestation of climate policy has moved beyond the market- versus non-market-based debate and is now “waged over the merits, design and implementation of market-based regulatory mechanisms.”¹⁶

Two main mechanisms – carbon taxes and emissions trading – have been devised to achieve the desired reductions in greenhouse gas emissions at minimum economic cost while creating a dynamic incentive for the innovation of cheaper abatement techniques.¹⁷ While there is some support for a carbon tax, the most prominent approach at the present time is emissions trading. Support for emissions trading as the key policy response to climate change is based on the assumption that pricing natural resources through market mechanisms is the most efficient solution to the production of environmental harms under the capitalist system of production and consumption.

The power of a market-based solution to climate change is linked to the ways in which it intersects with institutional and instrumental sources of power. First, market solutions support the existing neoliberal economic and political agenda. Second, a market-based model implicitly assumes that in the absence of state intervention carbon-polluting activities will be curtailed through penalties imposed by the market. Third, the political costs attached to finding a solution will be lower.¹⁸ Fourth, it recognizes the power of business actors. For example, in the context of the European Union Emissions Trading Scheme it has been argued that although business actors were not able to prevent mandatory emissions controls, they were able to influence the regulatory trend of climate politics toward emissions trading and market-based policies, effectively steering away from emissions caps and carbon taxes.¹⁹

¹² See Pearse 2010.

¹³ Stern 2007, viii.

¹⁴ Garnaut 2008, 370.

¹⁵ WBCSD 2002, 227.

¹⁶ Pearse 2010, 167.

¹⁷ Fankhauser 1995, 107.

¹⁸ Butcher and Stilwell 2009.

¹⁹ Meckling 2011, 27.

Market-based solutions to climate change represent the dominant orthodoxy's conception of legitimate knowledge. It is assumed that the operation of market forces is the best solution to the control of greenhouse gas production. That market forces are themselves intimately connected to the present crisis is not acknowledged. Within the debate on solutions to greenhouse gas production, neoclassical economics occupies a privileged place. Indeed, neoclassical economics functions in a hegemonic fashion circumscribing meanings and actions and privileging certain kinds of knowledge.

Science, (Un)Certainty and Environmental Policy

Uncertainty is a central feature of environmental crises and policy is formed in the context of uncertainty.²⁰ The existence of uncertainty highlights the importance of science and knowledge as the basis for sound policy. In the absence of the best available knowledge, policies promoting sustainable development are likely to fail. Moreover, a widening knowledge base is likely to enhance international cooperation through the identification of common interests.

Within approaches to environmental politics scientific reasoning has been afforded a central role²¹ in knowledge production because science has the potential to remove uncertainty. Discussion of the role of knowledge is normally related to the natural and physical sciences since it is science that typically alerts us to the existence of a problem. Indeed, while some environmental crises are easily visible, others are not. It is only through science that we can know the extent of pollution or whether certain chemicals are harmful or not. Thus scientific research has been central to the identification of ecological problems. In short, we would not know whether an environmental problem exists or not in the absence of scientific research. But caution should be observed in making a simple connection between knowledge and policy since in many cases the scientific evidence of environmental degradation may exist for some time before the issue becomes a political problem. One study, for example, has shown how despite considerable evidence of forest damage in Ontario caused by sulfur fumes this resulted in governmental inaction rather than the construction of an environmentally sustainable response.²²

The information provided by natural science is not only crucial in framing and constructing global environmental problems; science also has an important role to play in seeking solutions to environmental crises. Environmental harm arises from complex linkages and processes defining the relationship between humans and the natural environment. The causes of environmental harms are not self-evident and nor are the solutions. Given the transboundary nature of many environmental problems solutions cannot be found solely at the national level. Science has a crucial role to play in fostering international cooperation among competing national interests.²³

The impact of science stems from its acceptance as an impartial, objective enterprise. Science is highly prized because objectivity and truth are key goals of the scientific enterprise. Nevertheless, despite these claims to universality, objectivity and impartiality, the application of scientific knowledge to environmental problems remains a contested, controversial and conflictual enterprise. On one hand, science can provide the knowledge that enables publics and decision-makers to overcome uncertainty. On the other, the authority of science has

²⁰ Bryner 1997, 306–7.

²¹ Andresen and Østreng 1989.

²² Munton 2002.

²³ Vig 1999, 5.

frequently been called into question. The continued publicity given to so-called “climate skeptics” is a case in point. A rigorous international peer-review process has arrived at the conclusion that climate change is the result of human activity (that is, global warming is attributed to the emission of greenhouse gases into the atmosphere as a result of global industrialization). Nevertheless a well-funded lobby challenges the science and in many countries public understanding and acceptance of the real knowledge on this issue is very low. Moreover, science is a social activity and although scientific method may aim at objectivity, the uses to which science can be put engenders conflict. Scientists have an interpretive flexibility in the construction of knowledge and experts can be found supporting very different conclusions. Furthermore, the importance of science in determining outcomes varies from case to case.

While it is widely agreed that major scientific efforts are needed to identify the scale of problems and to provide solutions to environmental degradation no consensus exists on the impact of science or on the role of science in facilitating international agreement. To some extent this is because science is important for three aspects related to policy formulation. Science is not a single variable. It can be disaggregated into three components: “(1) knowledge about the extent of the problem, (2) knowledge about the causes of the problem, and (3) knowledge about its consequences.”²⁴ Thus knowledge about the extent, causes and consequences of environmental degradation is not uniform. In some circumstances there may be agreement concerning the extent of a problem but none on the causes or consequences. Similarly although the consequences may be apparent this does not guarantee agreement concerning the extent or the causal processes accounting for the problem. In other words, scientists may be in a position to demonstrate the extent of pollution without successfully establishing the causes of pollution.

Two case studies will be used to highlight the complex relationship between uncertainty, knowledge, and policy-making. The first case concerns the formation of an international regime for stratospheric ozone. It shows the possibility of constructing new governing arrangements in the face of uncertainty. But it is also a case in which there are conflicting interpretations of the role of science in facilitating this outcome. The second case concerns the dispute over agricultural biotechnology between the US and Europe and shows how in the face of contested knowledge, differing regulatory regimes have emerged.

Regime Formation in the Absence of Consensual Knowledge

The conventional wisdom suggests that science through consensual knowledge is likely to assist states to create binding multilateral agreements. But the proposition that some degree of scientific consensus is necessary before successful efforts at international cooperation can be concluded is not borne out by case studies.²⁵ This result suggests that the relationship between expert, scientific knowledge, and environmental policy-making is an extremely complex one. The case of regime formation to protect the stratospheric ozone layer has given rise to conflicting interpretations of the impact of science on the outcome.

The ozone regime consists of the Vienna Convention for the Protection of the Ozone Layer (1985), the Montreal Protocol on Substances that Deplete the Ozone Layer (1987), and four amendments to the Montreal Protocol. Ozone depletion was the first truly global environmental

²⁴ Dimitrov 2003, 128.

²⁵ Dimitrov 2003, 123.

crisis to be the subject of a successful negotiated outcome. Negotiations on ozone depletion are generally regarded as signaling a triumph for science and also as providing a model on how to proceed in the absence of scientific uncertainty. The framework convention approach allows negotiators to make agreement cognizant of existing scientific consensus but which can be modified later to take account of new scientific developments.

The fact that the regime for the protection of the ozone layer has followed this stage-by-stage approach suggests that increased cooperation between states has depended on improved knowledge. The view that science and scientists played an important role in the creation of a regime to protect the stratospheric ozone layer is well supported in the literature.²⁶ These analysts emphasize different aspects but reliable scientific knowledge is a key explanatory variable. As the chief American negotiator of the Montreal Protocol has argued, “the Montreal Protocol was the result of research at the frontiers of science combined with a unique collaboration between scientists and policymakers.”²⁷ The relationship between ozone science and ozone negotiations can briefly be sketched through an historical account of the background to the Montreal Protocol.

While fluctuations in the levels of the ozone in the atmosphere are standard, by the 1960s concern was expressed that human activity was having a negative impact on the ozone layer. By the mid-1970s there was heightened scientific interest in the impact of human activity on the stratospheric ozone layer. In the 1970s four types of human activity were perceived as harmful to the ozone layer: nuclear weapons, supersonic transport, mass consumption, and agriculture.²⁸ Initially most attention was given to the impact of supersonic aircraft. The first report linking mass consumption came in 1974 when Mario Molina and Sherwood Rowland, in an article in the June edition of *Nature* argued that chlorofluorocarbons (CFCs) were responsible for the depletion of stratospheric ozone through the release of chlorine into the atmosphere. Molina and Rowland’s research findings were catalytic in stimulating national and international interest. They sparked a series of national initiatives and international discussion over the next decade culminating in the Vienna Convention for the Protection of the Ozone Layer in March 1985.

The Vienna Convention for the Protection of the Ozone Layer was agreed at a time when there was still considerable controversy concerning the loss of ozone in the atmosphere and the causes of ozone depletion. Indeed a combination of uncertainty and diminished concern were key features of the process in the late 1970s and early 1980s.²⁹ Moreover, it was accompanied by disputes over the findings. Industry representatives challenged the scientific findings.³⁰ The head of the Environmental Protection Agency in the US called for further scientific investigation.³¹ The Vienna Convention reflected the state of knowledge at the time. It was a framework agreement which did not halt or reverse ozone depletion since no consensus existed on either the extent of the problem or the causes of the problem. It did, however provide the basis for further international cooperation.

Science was instrumental in shifting international action from the Vienna Convention to the Montreal Protocol. In May 1985, two months after the Vienna Convention was open for

²⁶ Benedick 1991; Haas 1992b; and Dimitrov 2003, 129–34.

²⁷ Benedick 1991, 9.

²⁸ Kemp 1990, 123–30; and Rowlands 1995, 43–52.

²⁹ Rowlands 1995, 52–5.

³⁰ Kemp 1990, 130.

³¹ Rowlands 1995, 53.

signature, an article published in *Nature* by the British Antarctic Survey team revealed the existence of a hole in the ozone layer above the Antarctic. They reported an alarming and unprecedented drop (over 40 percent) in ozone levels during the spring. Confirmation of these results was soon forthcoming and a new phase of scientific activity was set in motion. The significance of the discovery of the ozone hole is contested. On one hand, some writers evince skepticism concerning the extent to which the Antarctic “hole” influenced the negotiating process.³² On the other, it has been claimed that “the ozone hole created a sense of crisis that was conducive to the precautionary approach eventually sanctioned in the Montreal Protocol.”³³ If the evidence of the Antarctic ozone hole were not significant in influencing the negotiations, nevertheless, “science became the driving force behind ozone policy. The formation of a commonly accepted body of data and analyses and the narrowing of ranges of uncertainty were prerequisites to a political solution among negotiating parties initially far apart.”³⁴

The Montreal Protocol on Substances that Deplete the Ozone Layer (1987) went further than the Vienna Convention which had been limited to the enunciation of general principles. It proposed a 50 percent cut in certain CFCs by 1999, and a freezing on halons at 1986 levels by the end of 1992. The Montreal Protocol explicitly included the provision for treaty revision in the light of new knowledge and subsequent amendments – the London Amendment to the Montreal Protocol (1990), the Copenhagen Amendment to the Montreal Protocol (1992), the Montreal Amendment to the Montreal Protocol (1997), and the Beijing Amendment to the Montreal Protocol (1999) – have reflected the development of scientific knowledge.

While the role of science in the ozone negotiations is certainly important it is not necessarily determining, since the science was mediated through political and discursive processes. First, because the science was uncertain it was not always persuasive. Consensus on the consequences of depletion was not replicated in relation to the extent of depletion or the causes of depletion. This led to conflicting positions for most of the negotiations between the United States and the European Community. Furthermore, in the absence of agreement on the causes of ozone depletion there could be no consensus on the solutions required. The position of the developing countries were influenced by this uncertainty and the insistence of more advanced, populous developing states, such as China and India, on technology transfer and financial aid reflected doubts about the status of the knowledge. Second, “the science was framed and interpreted by a group of knowledge brokers with strong ecological beliefs who were associated with UNEP and the US Environment Protection Agency.”³⁵ That is, the ability to persuade industry groups and countries to change their positions was the outcome of a political process in which institutional actors played an important role. Third, Litfin argues that the impact of the science has to be understood in the context of other discursive factors mediating scientific knowledge.³⁶ She contends that the discovery of the Antarctic ozone hole was important in this context because it changed the perception of risk.

Regulating Agricultural Biotechnology: Sound Science versus the Precautionary Principle

Different national authorities have taken contrasting positions concerning the regulation of genetically modified (GM) food. Antithetical positions have been developed, for example, in

³² Benedick 1991, 18–20; and Dimitrov 2003, 131.

³³ Litfin 1994, 97.

³⁴ Benedick 1991, 204.

³⁵ Litfin 1994, 10.

³⁶ Litfin 1994, 116.

Europe and the United States. Disputed knowledge claims have been at the center of a trans-Atlantic conflict and bitter trade dispute.³⁷ In the absence of consensual knowledge competing claims abound, and public policy-making becomes even more difficult in the face of scientific uncertainty and competing knowledge claims. Conflict over the role of knowledge has been a constitutive feature of the debate on biotechnology. In other words, knowledge is internal and not external to the construction, development, and resolution of the debates over the benefits and dangers of biotechnology. Proponents of the application of genetically modified organisms (GMOs) to agriculture express confidence in the available scientific evidence. Opponents argue that in the context of uncertainty the precautionary principle should be applied. The dispute between supporters of GMOs and opponents should not be constructed as one between objective science and unnecessary caution since both positions are founded on values.

These differing perspectives on agricultural biotechnology have contributed to two contrasting regulatory environments in the United States and the European Union. The US position can be characterized as one based on sound science while the European approach rests on the precautionary principle. Both approaches claim to be founded on risk-based assessments but the European Union asserts that the precautionary principle is integral to both its risk-assessment process and regulatory framework.³⁸ It has been argued that the EU approach is essentially a protectionist one based on economic self-interest.³⁹ From this perspective restrictive biotechnology policies serve the economic interests of uncompetitive EU agricultural industries.⁴⁰ However, a narrow focus on economic interests provides an inadequate explanation for conflict over agricultural biotechnology. Food regulation in Europe is a sensitive issue and the regulations concern social and cultural factors as well as economic ones.⁴¹ It has also been argued that the precautionary approach used by the EU “redefines both risk and regulation in terms not of science but of cultural values.”⁴² But while culture helps to shape regulatory frameworks these frameworks are not purely deliverers of culture. The EU’s cultural beliefs have led to the adoption of a precautionary scientific approach as opposed to a sound science approach.

While the differing approaches may reflect economic interests or cultural imperatives they are also disputes over what counts as knowledge and how science is to be used in environmental policy-making. A brief review of the US–EU dispute over GM foods highlights the role of scientific uncertainty and the construction of policy on the basis of different epistemological positions.

The US maintains that GMOs are simply an extension of traditional plant-breeding methods of crop development, and are therefore equal to their conventional counterparts.⁴³ The United States Food and Drug Administration in consequence apply the principle of substantial equivalence to the regulation of GM foods. In other words, the principle of substantial equivalence treats GM foods as equivalent to conventional foods with the result that consumers do not have the right to know via labeling (for example) which foods have been genetically modified. Moreover, the US approach to GMO regulation is that of the “principle of minimal

³⁷ Levidow and Carr 2000.

³⁸ Carlane 2007, 316.

³⁹ Graff and Zilberman 2004.

⁴⁰ Graff and Zilberman 2004, 2.

⁴¹ Cadot et al. 2001, 17.

⁴² Goff 2007, 152.

⁴³ Sheldon 2004, 11.

oversight of food products that are generally regarded as safe (GRAS).⁴⁴ The US system for testing, evaluating, and marketing food items such as GMOs is based on a sound science framework. It utilizes risk analysis to obtain what is considered objective knowledge in order to make “value-free” policy determinations.⁴⁵ US development of GMO regulations was for the most part closed and included limited public and nongovernmental organization (NGO) involvement.⁴⁶

The EU regards conventional foods as distinctively different from GM foods⁴⁷ and has therefore established a different set of regulations for GM foods. The EU has adopted GMO-specific regulations based on the precautionary principle. This approach relies on the belief that scientific uncertainty can be resolved over time through learning.⁴⁸ Unlike the relatively closed US regulatory environment, the EU approach was adopted in response to consumer concerns. Consumers in a number of member states (notably in Austria, France, Germany, Greece, Italy, and the UK) have pressured their governments into enacting precautionary measures, such as bans on hormone-treated beef and GM foods. Overall, public concern has shaped the policy stance of member states, which in turn express these concerns at the EU level.⁴⁹

Actors, Knowledge and Environmental Negotiations

Effective participation in the global environmental politics is dependent on possession of specialized knowledge available only to a small section of the world’s elite. Multilateral environmental discussions are complicated and require specialized scientific, economic, and legal knowledge. The ability of groups to participate in an effective manner in negotiations on environmental issues is dependent on possession of such knowledge. The main actors in global environmental politics – governments, firms, and NGOs – support their positions through a claim of legitimate knowledge. Clearly not all actors in global environmental politics have the same access to knowledge. Access to and control over knowledge resources is a function of financial resources and legitimacy. In the search for reliable knowledge some groups and institutions are more privileged than others either because they control finances or because they have legitimate authority.

The framing of environmental issues and the search for solutions is dependent on access to finance. In the absence of well-funded research it is possible that a country or group may be unaware of environmental harm. The trade in toxic or hazardous wastes provides a pertinent example of the link between issue prominence and knowledge.⁵⁰ One source of inequality in international negotiations arises from the differential access to knowledge possessed by northern and southern states. It has been found that national capacity is also linked to the ability of governments to participate actively in international scientific networks.⁵¹

In global environmental politics the ability of an actor to secure legitimacy for their expertise is an important influence resource. Given their position in the political system it is usually accepted that governments possess legitimate knowledge. However, a government can forfeit

⁴⁴ Sheldon 2004, 11.

⁴⁵ Nicholson 2005, 2.

⁴⁶ Cadot et al. 2001, 20.

⁴⁷ Nielsen and Thierfelder 2006, 265.

⁴⁸ Sheldon 2004, 12.

⁴⁹ Kurzer and Cooper 2007, 1036.

⁵⁰ Clapp 1994, 1998.

⁵¹ Biermann 2002.

the trust of its citizens. Furthermore, science itself and rational enquiry can come under scrutiny in the light of environmental disasters. Although many NGOs lack large financial resources they have managed to be accepted as holders of legitimate knowledge. The ability of NGOs to represent themselves as disinterested “friends of the environment” has helped to secure legitimation for the knowledge claims they make.

A positive view of the way in which those in possession of scientific knowledge can influence policy-making has been developed by theorists who emphasize the importance of epistemic communities.⁵² An epistemic community has been defined as “a network of professionals with recognized expertise and competence in a particular domain and an authoritative claim to policy-relevant knowledge within that domain or issue-area.”⁵³ These transnational knowledge-based communities link scientists and policy-makers together and it has been argued play decisive roles in the creation of environmental regimes through dissemination of research findings. Critics point out that “scientific communities are not necessarily consensual or impartial. Tensions and conflicts occur within epistemic communities.”⁵⁴ Thus the policy outcome reflects the nature of social institutions, values, and power rather than the activities of an epistemic community. It is also possible to distinguish between an epistemic community comprising scientists with reliable information and one in which the knowledge claims remain subject to critique and contestation. From the above it can be seen that the dissemination of knowledge and the influence of knowledge brokers varies depending on a number of factors.

Conclusion

Knowledge is crucial for a holistic understanding of global environmental policy-making. In the first instance, the framing of an issue as an environmental problem is dependent on knowledge. As the chapter has argued scientific information is not objective. Knowledge is socially constructed. Because knowledge is a social construction we need to look at how knowledge is framed. In examining knowledge and global environmental policy it is important to look at competing knowledge claims, the engagement between competing perspectives, and the differential access to knowledge by the diverse participants. In this sense knowledge is internal to the construction of environmental issues.⁵⁵

Second, uncertainty over knowledge claims features prominently in international policy-making on the environment. Because policy-makers are dealing with uncertainty, knowledge is important in trying to find solutions to problems. But the chapter has also argued that no simple relationship exists between uncertainty and knowledge.

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⁵² Haas 1990.

⁵³ Haas 1992a, 3.

⁵⁴ Hurrell and Kingsbury 1992, 19.

⁵⁵ Epstein 2005.

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35 The global politics of geoengineering

David Humphreys

In August 2010 the Oxford University Press announced the words that would appear for the first time in the latest edition of the *Oxford Dictionary of English*. Making its debut – alongside “credit crunch,” “microblogging,” and “vuvuzela” (the shrill horn that was the sound of the 2010 football World Cup) – was “geoengineering,” defined as “the deliberate large-scale manipulation of environmental process that affects the earth’s climate, in an attempt to counteract the effects of global warming.”¹ While its inclusion represented a coming of age of sorts, marking a recognition of the widespread use of the term, geoengineering remains an idea rather than an actually existing strategy or set of practices. Nonetheless, many scientists and policy-makers are concluding that with the increasing unlikelihood that mitigation measures will occur fast enough to avoid catastrophic climate change it is now time to think of a “Plan B.”

Climate change can be understood as a process that takes place due to changes in two main variables: atmospheric concentrations of greenhouse gases and the albedo, or reflectivity, of the planet. Greenhouse gases, such as carbon dioxide CO₂, methane, nitrous oxide, chlorofluorocarbons (CFCs), and water vapor, trap long-wave radiation, leading to climatic warming. They do not trap incoming short-wave solar radiation or short-wave radiation reflected from highly reflective surfaces, such as ice sheets, which have a high albedo. Albedo is a quantitative measure of the radiation reflected from a body or surface on a scale from 0 to 1. A perfect black surface absorbs all radiation that strikes it and has an albedo of 0, whereas a perfect white surface reflects all radiation and has an albedo of 1. Much of the radiation absorbed by dark surfaces of the earth, such as oceans, forests, and some urban settlements, is re-emitted as long-wave radiation and absorbed by greenhouse gases, warming the planet. The average long-term albedo of the earth is approximately 0.31.²

So the earth will be warmer the more dark surfaces it has and the greater the atmospheric concentration of greenhouse gases, and will be cooler the more reflective surfaces it has and the lower the atmospheric concentration of greenhouse gases. To counter the effects of anthropogenic climate change two clusters of geoengineering technique have been proposed. Solar radiation management (SRM) aims to reduce the long-wave solar energy emitted from the earth, while carbon dioxide removal (CDR) aims to remove CO₂, the most important greenhouse gas, from the atmosphere.

Solar Radiation Management

SRM techniques would either prevent short-wave solar radiation entering the atmosphere or increase the planetary albedo, thus reflecting more incoming short-wave radiation back into space. It has been estimated that the warming caused by a doubling of the pre-Industrial Revolution atmospheric concentration of CO₂ can be countered by an increase in the earth’s

¹ Oxford Dictionaries Online 2010.

² Royal Society 2009, 23–4.

albedo from approximately 0.31 to 0.32,³ and that this can be achieved by reflecting or shielding approximately 1.8 percent of incoming solar radiation.⁴

SRM techniques may operate at three scales: in outer space, in the atmosphere, or on the earth's surface. Space-based techniques would reflect solar radiation away from the earth. Most such proposals center on inserting a large reflective shield, or set of shields, in a Lagrange orbit, where the forces of gravity between the sun and the earth cancel each other out. The costs of such an enterprise would be, well, astronomical. It would be cheaper to place reflective shields in near-earth orbits, although this would not necessarily be cost-effective; shields in a Lagrange orbit would be closer to the sun and would thus reflect more solar radiation than shields in near-earth orbits. Furthermore, shields in near-earth orbits would spend half of their time in the earth's shadow during which they would reflect no solar radiation.

SRM techniques operating in the atmosphere would increase the planetary albedo through altering the composition, or increasing the extent of, clouds, thus reflecting short-wave solar radiation before it strikes the earth's surface. This technique has a natural analog. Emissions of sulphate particles from volcanic eruptions have an aerosol effect, reflecting solar radiation and thus producing a cooling effect, most recently with the 1991 eruption of Mount Pinatubo in the Philippines in 1991.⁵ The emission of sulphate aerosols from fossil-fuel burning also has a planetary cooling effect, sometimes called "global dimming."⁶ Whereas global warming is the result of increased atmospheric concentrations of greenhouse gases, global dimming is a cooling effect due to a reduction in solar radiation striking the earth's surface. Sulphates have an atmospheric residence time of just a few years before falling back to earth as either dry depositions or wet depositions (acid rain). The Convention on Long Range Transboundary Air Pollution (CLRTAP) and subsequent related protocols has reduced sulphate emissions from industry, thus reducing global dimming and contributing to an increase in observed climatic warming.⁷ Successfully tackling one atmospheric pollution problem has thus exposed the full extent of another.

One proposal for SRM is to inject sulphate particles into the stratosphere thus increasing the atmospheric albedo. Sulphate injection methods include firing artillery shells, lacing aircrafts fuel with sulphates and releasing sulphates from giant balloons.⁸ Sulphates would have a greater cooling effect if injected into the stratosphere, falling to earth more quickly at lower altitudes.⁹ But it has several disadvantages, namely less sunlight for solar power and for plant photosynthesis. It would also lead to stratospheric ozone layer depletion. A second proposal for enhancing atmospheric albedo is cloud whitening through the spraying of droplets of seawater into low-level clouds. This could be achieved from remote-controlled boats operating by sail or solar power, increase the albedo of existing clouds and seeding new clouds.¹⁰

Surface-based SRM techniques would aim to increase the earth's surface albedo. Proposed techniques include painting the roofs of buildings white and installing desert reflectors in tropical countries. These techniques would be most effective in solar-rich countries. It has also

³ Royal Society 2009, 23–4.

⁴ Govindasamy and Caldeira 2000.

⁵ Rasch et al. 2008.

⁶ Lovelock 2008.

⁷ Crutzen 2006, 211.

⁸ Robock et al. 2009.

⁹ Crutzen 2006.

¹⁰ Latham et al. 2008; and Salter et al. 2008.

been suggested that planetary albedo would be increased through the genetic modification of fauna to breed lighter species of trees and crops.

Different SRM proposals have different degrees of affordability and effectiveness. Injecting stratospheric sulphates could be done reasonably quickly and cheaply, whereas installing space-based solar shields would take decades. However, a reliance solely on SRM would mean atmospheric concentrations of CO₂ remain high, as would the absorption of CO₂ by the world's oceans, leading to increased ocean acidification.¹¹ There is evidence that ocean acidification is changing ocean chemistry, interfering with the process of calcification by which some marine species use calcium carbonate to produce shells and plates and negatively influencing the prognosis for phytoplankton.¹²

A high CO₂/SRM world will be very different from a low CO₂ world hence, it is often argued, that if geoengineering is to take place the primary emphasis should be not solar radiation modification but CDR.

Carbon Dioxide Removal

In contrast to SRM, CDR techniques would reduce atmospheric concentrations of CO₂, the main greenhouse gas. Four main CDR techniques have been proposed: terrestrial biological sequestration, ocean fertilization, mineral sequestration, and carbon capture devices.

The main proposed terrestrial biological sequestration technique is increasing the global extent of forest cover, thus increasing the earth's carbon sink capacity. (In many respects this is a conventional mitigation activity. However, it is often included in geoengineering studies, so the boundary between mitigation and geoengineering is somewhat fuzzy.) The pressure on land space for urban settlements and agriculture means that there is limited scope for reforestation. Another proposal is the production and burying of biochar, carbon-rich charcoal produced by the burning of trees, biomass and crop waste through pyrolysis (burning with no oxygen present).¹³ Biochar can be mixed with soil or buried underground where, as it is virtually inert, it will remain for a centennial to millennial timescale. One proposal is to produce plantations of trees with a fast growth rate such as willow which are then felled and turned into biochar when they reach maturity.¹⁴

Ocean fertilization is the addition of nutrients such as iron or nitrogen to the oceans in order to seed oceanic uptake of CO₂ through enhanced algae and plankton growth.¹⁵ Dead algae and plankton often sink, carrying sequestered carbon to the seabed. However, there are doubts on the long-term effectiveness of fertilization. Iron fertilization experiments have been carried out in the Southern Ocean,¹⁶ some of which reveal that while fertilization can lead to increased uptake of CO₂, the uptake is similar to that of natural blooms making very little difference to global carbon budgets.¹⁷ Ocean fertilization is only likely to be effective in stabilizing the climate if sustained on a millennial timescale.¹⁸

Mineral sequestration is a third CDR proposal that has been made. The sequestration of carbon in minerals takes place naturally over thousands of years through geochemical

¹¹ Govindasamy et al. 2002, 2003.

¹² Riebesell 2004; and Giddens 2009, 18–20.

¹³ Lehmann et al. 2006.

¹⁴ Woods and Leake 2009.

¹⁵ Lampitt et al. 2008.

¹⁶ Smetacek and Naqvi 2008.

¹⁷ Buesseler et al. 2004, 414.

¹⁸ Lenton and Vaughan 2009.

weathering. For CO₂ to be chemically reactive it first needs to be dissolved in water to yield carbonic acid. Rainwater laden with CO₂ is a weak form of carbonic acid which reacts with alkaline rock minerals to produce inert minerals called carbonates. While mineral sequestration takes place naturally only over millennia, experiments in Iceland have shown that sequestration can be enhanced through injecting CO₂ under pressure into basalt aquifers.¹⁹ When injected into such aquifers the CO₂ reacts with water to become carbonic acid before reacting with rock minerals to become carbonates. If no aquifers are present, then water needs to be injected alongside the CO₂.²⁰ The advantage of mineral sequestration is that once the CO₂ has been converted into a stable solid state it is, in effect, permanently sequestered.²¹

A fourth CDR technique, proposed by Klaus Lackner is “artificial trees,” carbon capture devices in towers in windswept areas that would physically remove CO₂ from the atmosphere. Air would flow into the tower and through a sorbent (a material that can trap liquids or gases). In the case of artificial trees, the sorbent should be CO₂ selective, capturing CO₂ but not other gases. A good sorbent is environmentally benign and can withstand repeated recycling.²² The best sorbent identified to date is solid material of particles of resin embedded in a polypropylene sheet.²³ Exposing the resin to water releases the CO₂, creating a stream of CO₂ gas that can be compressed to pipeline pressures and pumped to a secure location.²⁴ Lackner’s intention is to design a device that can be mass produced and fit into a standard shipping container; 10 million devices could remove between 10 and 20 Gt of CO₂ every year. He compares the figure of 10 million favorably with the approximately 73 million cars and commercial vehicles produced annually.²⁵

Intentionality, Legality and Morality

The issue of intentionality is significant to geoengineering politics. In international law actions that are intended to change the environment are viewed differently to actions that have an unintended outcome. A relevant international instrument in this respect is the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (ENMOD) agreed in 1976. The convention outlaws deliberate environmental damage as a means of warfare. It can be argued that the convention would not apply to geoengineering: the ENMOD convention was not drafted to cover geoengineering; it entered into legal effect before geoengineering was a political issue; and geoengineering cannot be construed as “hostile” as it is intended to save the planet from catastrophic climate change.

Against this it can be claimed that the implementation of a geoengineering technique would count as hostile and violate the ENMOD if a state undertook geoengineering knowing it would entail serious negative effects such as drought for other states, even when the intention was to prevent a greater harm to people and ecosystems. Injecting sulphates into the atmosphere with the intention that they be dispersed worldwide to alter the global climate could be considered intervention in the affairs of other states if this led to adverse ecological consequences, unless those states that suffered ecological change had first given their consent.²⁶ States that suffer

¹⁹ Kunzig and Broecker 2008, 253; and Matter et al. 2009.

²⁰ Schuiling 2006.

²¹ Goldberg et al. 2001.

²² Lackner et al. 1999, 11.

²³ Lackner 2009, 98.

²⁴ Lackner 2009, 101.

²⁵ Lackner 2009, 103.

²⁶ Bodansky 1996, 309, 315.

ecological harm as a result of such activities could claim compensation from those states that intentionally changed the climate. In distinction, the situation in international law of those actions that have led to anthropogenic climate change over the last three centuries is much less clear cut. The ecological effects of anthropogenic greenhouse gas emissions are unintentional.²⁷ For example, the intention of fossil-fuel burning is not to change the climate, but to generate energy.

So it is likely that in terms of liability, geoengineering will be viewed more seriously under international law than fossil-fuel burning. Morally, however, it can be argued that the anthropogenic emissions of greenhouse gases is far more serious than geoengineering. Admittedly for the first two hundred years of the Industrial Revolution there was no real understanding of the ecological effects of fossil-fuel burning, hence those that engaged in such practices could not be considered morally responsible for the consequences of their actions. However, knowledge on the consequences of an action changes the moral standing of the action itself. It can be argued that the establishment of scientific knowledge on some of the existing and likely future effects of greenhouse gas emissions has – and notwithstanding some significant scientific uncertainties, such as the complexities of positive feedback loops in the climatic system – changed the moral status of fossil-fuel burning. It might even be argued that catching a flight or turning on a light switch can be considered immoral in that it involves consequences for unseen groups and generations. While geoengineering is undeniably intentional, it can be claimed that it is a lesser evil than fossil-fuel burning; the only reason geoengineering is posited as a climate control strategy in the first place is to offset the greater harm of burning fossil fuels for short-term ends, leading to serious, possibly catastrophic, climate change.

A different jurisprudence may view activities that contribute to anthropogenic climate change very differently. Green jurisprudence, or earth jurisprudence, argues for an expansion of criminal law to encompass crimes against the environment, with universal legal principles and rights not only for people and societies, but for nature and biological processes too.²⁸ The landmark text of green criminology is Christopher Stone's 1972 paper "Should Trees Have Standing?," which argues that rights should not be solely anthropocentric and that natural objects should be granted legal rights of protection similar to those enjoyed by humans. More recently, Reece Walters has argued that existing legal arrangements, including international law, are biased toward the economy and free trade rather than the requirements of environmental protection, something that could be remedied by a more expansive notion of harm that includes harms against the environment.²⁹ There is now a growing political recognition that nature has rights, particularly in South America. In 2008 Ecuador became the first country in the world to recognize rights for nature in its constitution, which states "Every person, community, town (village) or nationality will be able to demand to the public authority the compliance of the rights of Nature."³⁰ The following year the president of Bolivia, Evo Morales, made a proposal to the UN General Assembly, subsequently adopted, that 22 April of each year be designated International Mother Earth Day.³¹ Morales argued that 60 years after the UN adopted the Universal Declaration of Human Rights it was time to recognize a new generation of rights, the rights of the earth.

²⁷ Keith 2000, 247.

²⁸ Cullinan 2002.

²⁹ Walters 2009, 2010.

³⁰ Ecuador Constitution 2008 Article 71, cited in Stober 2010, 235.

³¹ United Nations 2009.

The recognition of legal rights for the earth, nature, and natural objects is an embryonic jurisprudence that is by no means accepted uncritically by many legal scholars. However, the main point is that if such a jurisprudence were to develop it could lead to successful legal challenges in the courts against development activities that degrade the integrity of ecosystems. Under such a legal system certain activities, such as fossil-fuel burning, could be considered illegal, or at least be viewed more seriously than they are under current international legal arrangements. Again, the question of intentionality is important. Under a green jurisprudence states may be liable for damages if they engage in activities that they *know* will degrade the environment, even if environmental degradation were not the primary *intention* of the activity.

The question then becomes, would geoengineering be a legitimate strategy under a green jurisprudence? There is no obvious answer to this question. Much depends on whether geoengineering is seen as an environmental protection strategy designed to maintain the ecological integrity of the earth, or a high-risk and profoundly uncertain strategy of ecological interference that could have deleterious consequences for nature and humanity. In many respects it is both. Geoengineering is also a strategy that is not subject to a single unambiguous interpretation of the precautionary principle, a principle which itself has different formulations.³² One formulation is that where there is scientific uncertainty on whether an action will generate negative environmental consequences, the action should not take place. On this view, geoengineering should not take place as there are major uncertainties on the consequences it may have. A second formulation of the precautionary principle is that lack of full scientific certainty is not a legitimate reason to postpone measures to safeguard the environment. On this view geoengineering is permissible as its intention is to protect people and ecosystems from the greater hazard of runaway climate change. A more nuanced view is that there can be no blanket application of the precautionary principle to geoengineering, as different geoengineering techniques entail different risks and different levels of uncertainty. For example, the reduction in sunlight reaching the earth's surface through SRM could affect the photosynthesis of plants and have unanticipated effects on nature production. While SRM might help to stabilize the global mean temperature, the risk of other environmental harms, such as continued ocean acidification, could make SRM incompatible with the precautionary principle. CDR techniques, it could be argued, are more consistent with the spirit of the precautionary principle, as they would seek to stabilize, or reduce, high atmospheric concentrations of greenhouse gases.

One argument often invoked against geoengineering is that its possibility leads to moral hazard. The moral hazard argument is that while most geoengineering proposals exist only as theoretical ideas, the possibility that they could be available to counter global warming (in some cases at very low cost) in the future diminishes the political will for mitigation measures in the present.³³ However, there is no real empirical evidence to support this. We might ask a counterfactual question: would states have agreed more stringent mitigation policies had geoengineering not existed as a future possibility? There is little to suggest that this would be so. Geoengineering has not been a factor in international climate negotiations, and the lack of international agreement on emissions reduction lies elsewhere, in particular on whether some states should assume a greater responsibility to reduce emissions based on

³² Harremoës et al. 2002.

³³ Keith 2000, 276; and Royal Society 2009, 37.

historical responsibility, and what obligations, if any, developed states have to assist developing countries with financial and technological assistance.

The Governance of Geoengineering

At present there is no international legal or governance architecture for geoengineering although there are several international legal instruments that have, or could be amended to have, a geoengineering-related mandate. The 1979 CLRTAP addresses the problem of acidic depositions by regulating emissions of sulphates and other atmospheric pollutants in Europe and North America. The deliberate release of stratospheric sulphates for SRM by state parties to the CLRTAP could be illegal under the convention and its related protocols. The Montreal Protocol of 1987 aims to phase out the production of ozone-depleting substances, principally CFCs and hydrochlorofluorocarbons (HCFCs). It does not address other activities that would deplete the ozone layer, such as stratospheric sulphate injections although it could be amended to ban such activities.

The Framework Convention on Climate Change (FCCC) of 1992 promotes the reduction of greenhouse gas emissions, and the enhancement of greenhouse gas sinks, both marine and terrestrial.³⁴ In addition to increasing global forest cover, the earth's carbon sink capacity could, at least in theory, be enhanced through ocean fertilization. International organizations and instruments with a mandate that could be interpreted to cover ocean fertilization include the International Maritime Organization, which administers the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (the London Convention) and its 1996 London Protocol, the United Nations Convention on the Law of the Sea (UNCLOS) of 1982, the Convention on Biological Diversity of 1992, and the Intergovernmental Oceanographic Commission (a scientific marine research body).

Some of these international legal instruments can be amended to govern geoengineering. Protocols to the FCCC and CLRTAP could provide international rules on, respectively, biochar and sulphate emissions, while protocols to the UNCLOS and London Convention could govern ocean fertilization. But relying solely on existing international organizations and instruments for long-term geoengineering governance would likely lead to fragmented and incoherent decision-making. Ideally, any global governance architecture for geoengineering should cover those techniques that would operate within the global commons (broadly defined to include outer space as well as the atmosphere and the oceans) and those that would operate on the territory of sovereign states. SRM techniques that would operate in the global commons include space-based solar reflectors, stratospheric sulphate injection and cloud whitening, while the principal CDR technique operating in the global commons is ocean fertilization. Territorially based SRM techniques include desert solar reflectors and roof whitening. Territorially based CDR techniques include reforestation, biochar, mineral sequestration, and artificial trees. (While based on the sovereign territory of states, these techniques would remove CO₂ from the atmospheric commons.) Constructing a single, comprehensive and interconnected system of governance that handles the emerging scientific and political questions for all these techniques would likely take years.

One proposal is for an Earth Commission for Thermostatic Control that would seek to regulate both atmospheric concentrations of greenhouse gases and human-induced changes to incoming solar radiation.³⁵ Another possibility is for states to agree an international convention

³⁴ United Nations 1997, article 2.

³⁵ Flannery 2006, 291.

on geoengineering and a new international organization that would address the complicated science and politics of planned climate regulation in a coherent and unified way. But agreeing to such an arrangement may not be possible. Attempts to create a World Environment Organization have so far proved unsuccessful³⁶ and states have been unable to agree a single governing arrangement for the sustainable management of the world's forests.³⁷

But if agreeing to a comprehensive geoengineering governance architecture is beyond reach, at least in the short term, having no international governance mechanism at all is undesirable for three reasons. First, some degree of international coordination is necessary as different geoengineering techniques could interfere with one another. For example, effective SRM techniques would reduce the solar radiation striking the earth's surface which in turn would reduce the effectiveness of afforestation and ocean fertilization, both of which rely on photosynthesis to draw down CO₂. SRM would also result in less solar radiation available for solar power. If the earth's climate is to be regulated, an international coordination mechanism of some kind is necessary.

Second, decision-making procedures to agree "who does what" are essential to prevent states acting alone. Countries with an advanced technological capability could implement commons-based SRM techniques acting unilaterally. In theory, one state could cool the planet by successfully installing a solar space reflector. Only a few states have such a capability, such as the US, Russia and China. Similarly, only a few states have the capability to inject stratospheric sulphate aerosols, at least on the scale required to cool the planet. The risk of international conflict could be significant if states were to take measures to change the world's climate unilaterally, especially if this resulted in ecological hazards for states that had not given their consent. There would also be important issues of fairness and equity if the power to determine world geoengineering policy were to lie with those countries that have benefitted most from fossil fuels and whose actions have contributed the most to the problem of anthropogenic climate change.

In distinction to common-based techniques, territorially based techniques would be relatively ineffective when implemented by one state alone. For example, roof whitening in just one country would not significantly increase the earth's albedo, nor would biochar production in one country lead to significant carbon sequestration. This leads on to the third reason why international cooperation on geoengineering is necessary. To have a significant effect, territorially based techniques would require international agreement, and that would require a majority of states to act. These techniques would constitute a collective action problem, one that cannot be solved by one country alone and which requires international cooperation. International cooperation over these techniques would face the problem of Prisoners' Dilemma-style defections that have bedevilled international environmental cooperation. Territorially based techniques, such as roof whitening, desert reflectors and biochar burning, would also require the active participation and support of local authorities and communities if they were to be effective, calling for a very different form of governance from those techniques operating in the global commons.

A more feasible approach than an international geoengineering convention is for states to design an international arrangement that moves beyond existing international instruments, but which stops short of a new international institution or instrument. Legislatures in the UK and

³⁶ Biermann 2007.

³⁷ Humphreys 2006.

US have already indicated some support for this option. In 2009 a joint initiative of a House of Commons select committee and a House of Representatives committee on the regulation of geoengineering called for “the groundwork for regulatory arrangements to begin” and for governments “to push geoengineering up the international agenda.”³⁸ The initiative called not for a new treaty, but for a set of principles to guide international cooperation on geoengineering. This was the first time a House of Commons select committee had collaborated with a committee of another legislature.

International cooperation on the research, development, and implementation of geoengineering will need to address some scientifically significant questions. For example, what is the desired end point of geoengineering, in other words the temperature that should be aimed for? It might appear that the objective of geoengineering should be to return the climate to a pre-Industrial Revolution “natural” state. A more hubristic view might be that the earth’s temperature should be engineered to whatever level is most agreeable to human activities.³⁹ If this is the case then the question becomes, what should that desired mean temperature be, and how should it be decided. Different states, and different scientists, would be unlikely to agree on a single temperature. So whose desired temperature should then prevail?

A second question is when, if at all, should recourse be taken to geoengineering as an option? In other words, at what trigger point should states cease relying on mitigation measures to stabilize the climate and start introducing the first large-scale geoengineering techniques? Possible triggers are a predefined global mean temperature, an agreed “dangerous” atmospheric concentration of greenhouse gases, a particular rate of change of the earth’s temperature, or the collapse of a particular ecosystem, such as an ice sheet or area of forest. Should CDR have priority over SRM technologies, at least in the first instance? Any triggers would need to be informed by sound scientific knowledge, but unavoidably would also be politically negotiated, in much the same way as FCCC decisions are the product of both scientific knowledge and political bargaining.

Conclusion

It needs to be asked how the risks of runaway climate change compare with those of geoengineering, and why human society should rely on additional planetary scale interventions in the earth’s climate to undo the harm caused by fossil-fuel burning. But assuming that geoengineering will happen – and there seems to be a slowly growing scientific and political consensus that sooner or later it will – then there is a need to agree how decisions will be made and who will make them: who will pay for research and implementation; what obligations states should be expected to assume; and whether states that do not honor their obligations, whatever they may be, will face censure. But irrespective of the institutional design and the different obligations of states, an important attribute any international mechanism will need is long-term durability. As Stephen Schneider has argued, any institution to govern geoengineering would, if it were to be effective, need to “be maintained without interruption by wars or ideological disputes for the next two centuries.”⁴⁰ But agreeing such an international arrangement would, of course, be no guarantee that geoengineering would be effective. Any attempts to geoengineer the earth’s climate would be highly problematic, adding a new layer

³⁸ House of Commons 2010, 3.

³⁹ Jamieson 1996, 325–6.

⁴⁰ Schneider 1996, 299.

of risk to climate science, and to global environmental politics. The only certainty seems to be that calibrating with any degree of precision the climatic, ecological and social effects of geoengineering will itself be beset with some huge scientific and political uncertainties.

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36 A sustainability ethic

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If ethics enters an exposition on public policy, business, law or medicine, it typically comes at the end, after all the data and cases and analyses are completed. In a longstanding project, what I call “a social theory of ecological sustainability,” I elect to put ethics right up front, in part to be contrary, but in part to make explicit a defining feature of sustainability. When all is said and done, when all the science is laid out, concepts built up, and histories written, the sustainability question is about values, values embedded in worldviews and expressed through the principles and language of individual choice and collective action. And value choices are ethical choices.

Another reason I open with ethics is to be as clear as possible about my own value choices *as a social theorist*. I take sustainability as a social goal on the order of peace, democracy, and justice. For all the uses and abuses of the term,² for all the bending and stretching of the concept to accommodate every sundry agenda, I see sustainability as a major social imperative of our time, as a defining feature of the twenty-first century, perhaps *the* defining feature: if we do not get this right, all the rest – economic prosperity, freedom, human rights – are moot.

I also put ethics up front because, to engage the ethical is to prompt the definitional. It is to specify the scope of the task, to clarify what is foundational, to assert that a concept like sustainability does not do everything, it does not address all concerns, it does not account for all values. No concept or social goal can, or should. When concepts are so stretched, they lose all meaning.³ So I take the position that a strong and meaningful notion of sustainability is one that is not, among other things, fundamentally about economic prosperity, freedom, human rights, or about peace, democracy, and justice. As much as advocates wish to agglomerate all values and goals under a single term that then becomes something roughly equivalent to “good,” I take the position, best articulated by Sharachchandra M. Lélé some time ago, that building a concept of sustainability through a “proliferation of objectives” may be politically useful but weakens what is a potentially powerful, indeed crucial, concept.⁴ Thus, scoping out the concept of sustainability here via an ethic of sustainability sets the stage for more analytical and, eventually, political work. I begin here by setting a sustainability ethic apart from existing ethics of the environment.

Ethics of Natural Resources and the Environment

On the face of it, a sustainability ethic might appear to be yet another environmental ethic, a combination, say, of “preserve nature” and “use resources wisely” ethics. Here I look back to

¹ I thank Hugh Dyer, Lisa Disch, and the members of the University of Michigan’s seminar on sustainability ethics for comments on an earlier draft.

² Regarding the uses and abuses of the term “sustainability,” consider this list of usages, gleaned from both academic and popular literature: sustainable parking, sustainable pavement, sustainable ceasefire, sustainable globalization, and sustainable growth.

³ For a simple test of what a user of the term sustainability means, one can ask three simple questions: what is being sustained? for whom? for how long?

⁴ Lélé 1991, 611.

identify four ethics. These, I argue, are different from, yet set the stage for, an ethic of sustainability. The first, dominium, reaches far back in time, the other three – conservation, preservation, and protection – are twentieth century with a distinctly American flavor. All, arguably, inform current practices, in the US and around the world, from primary resource extraction and land conversion to agricultural experimentation and chemical innovation to waste generation and waste disposal. Looking forward, these four will, if the biophysical and societal trends persist, recede to the background as the imperatives of reversing those trends in environmental degradation and getting on a sustainable path become immediately urgent. It should also be noted that my treatment of these ethics is brief, broad-brush, and simplified, intended only to note, not develop, the essential elements – social organizing principles, metaphors, and worldviews – of the ethical frameworks that currently inform modern industrial and industrializing societies.⁵

Dominium has the longest history.⁶ Its major social organizing principles are expansion and control. Under this ethic, a people should acquire resources by extending their territorial reach, whether by legal, commercial, or military means and exerting control over nature and people. Common metaphors of the environment are “colony” (for example, extract resources from the hinterland, the periphery, less industrialized countries) and “servant” (for example, nature is man’s servant). The worldview is one of abundant natural resources existing for human use and readily manipulated. At the same time, famine is always just around the corner. Thus, an ethic of dominium is about *total* use. It says that natural resources should be used to the fullest and when available; to use resources only partially or to wait to use them is not just a waste but a missed opportunity, which can result in great human suffering. This ethic says that one should extract and control and manipulate resources for their best use and do so completely; not to so use them is to violate nature’s plan or God’s will, and it is to put at risk societal cohesion, even survival.

A *utilitarian conservation* ethic, typified by the resource policies of Theodore Roosevelt and his forestry chief Gifford Pinchot in the US, organizes around principles of efficiency and growth. The environment is expressed through metaphors such as the frontier, laboratory, factory, crop, and machine. Its worldview is a nature that provides raw materials and a platform from which to build a better world. Nature should be shaped to create new value, value that cannot be realized in a mere “state of nature.” Thus, a utilitarian conservation ethic says that nature should be used to create the greatest good for the greatest number of individuals. It too is about total use. But it has an inherent egalitarian element as well. I refer to this and the dominium ethic as “natural resource ethics.”

The complementary ethic to conservation is *preservation* where organizing principles include the rights of nature and wilderness. Parks, sacred groves, and gardens of Eden are typical metaphors. The worldview of the environment is nature as wildness, as a thing of beauty and inspiration. Preservation, by setting aside precious tracts of land and water, thus tempers the tendency of dominion and utilitarian conservation ethics toward total use of nature. It challenges

⁵ This sketch of four ethics of the environment is by no means intended to be comprehensive or definitive, historically, or philosophically. It only constitutes some preliminary stage setting from which the star of the show, sustainability, can be highlighted. Among the sources of this fourfold typology are Leopold 1933; Koppes 1988; Nash 1989; Bernard and Young 1997, 18–40; Crocker and Linden 1998; Sagoff 1998 [2008]; Guha 2000; Rolston 2000; and Leiserowitz and Fernandez 2008;

⁶ I choose the term “dominium” because of its connotation of property relations, whereas “dominion” has a connotation of national sovereignty and power.

total use but not the precepts of the natural resource ethics. The ideal is portions of pristine nature devoid of human impact yet available for human appreciation, all while the rest of nature is appropriated for maximum human value.

The fourth ethic, emerging in the US in the 1960s with Rachel Carson's *Silent Spring* and taking shape with the environmental laws and regulations of the 1970s, is *environmental protection*. Here the organizing principle is the human right to a clean environment. The environment of concern is the "commons" or, more properly, those resources and waste sinks owned by no one and open to everyone – the atmosphere, the oceans, the soil, the great untouched forests and rivers and lakes and estuaries. For this environment, humans are construed as trustees. The worldview of the environment is a nature that can harm us, that, with our repeated insults, can bite back. I refer to this and the preservation ethic as "environmental ethics."

Two observations regarding these four ethics – natural resource and environmental – pertain. First, nature (or, in more scientific language, biophysical systems or the biosphere) is seen as separate from humans (or social systems or the economy). As a result, these ethics say that we humans should conquer and control, extract and process, produce and consume, set aside and protect, detect and remediate. Taking as axiomatic for the time being that it is this very disconnect that, in practice, drives much of today's environmental degradation, an ethic for our time, a time of excess human impact and global ecological constraint, would aim at reconnection. It would create a useful language, develop a set of organizing principles, identify elements of a worldview that makes *connection*, not separation, the norm.

Second, as an Environmental Protection Agency official, Patricia Hynes, remarked about the United States Federal Insecticide, Fungicide, and Rodenticide Act of 1972, an observation that could apply to most environmental laws, domestic and international, the Act has a fundamental flaw: "it lacks an ethic of nature and any high-minded idealism. It fails to implement the fundamental critique of [Rachel Carson's] *Silent Spring*, that chemical control is a war on nature, waged in ignorance of ecology."⁷ Instead, Hynes says, we need laws and, more fundamentally I would add, norms and principles, indeed an ethic, that have "ecological intentionality." By "intentionality" Hynes may have meant no more than that the National Environmental Policy Act (NEPA) itself was written with the idea of restoring and enhancing basic ecological functioning. But we can take it a step further and presume that ecological intentionality means the primary *target* of all laws and regulations is the biophysical foundations of society, especially its material-provisioning and waste-disposing system, otherwise known as an economy. We can further presume that the authors of NEPA and other environmental laws, treaties, codes, and charters have known that if the ecological foundations are not secure, nothing else of value can be either, not the economy, not democracy, not peace and prosperity. A sustainability ethic, by this argument, is prior to other ethics. It is material; it is foundational.

In short, because these four ethics construe humans as separate from nature and because they lack ecological intentionality (or, a focus on biophysical foundations), they cannot guide action when the problem is, indeed, fundamentally about humans' relations to nature, about excess and the failures of self-management on the one hand, about threats to life-support systems and the erosion of biophysical foundations on the other. They cannot guide action when the scale of the problem is so great, both spatially (it spans the planet) and temporally (it exhibits huge cause–effect time lags) (see below). That problem, variously called the

⁷ Quoted in Bernard and Young 1997, 33.

problem of *unsustainability*, global ecological crisis, the global environmental problematic, global change and climate destabilization, requires a different ethic, a sustainability ethic.

So an ethic of sustainability is different from prevailing ethics of natural resource use and of the environment. It is neither a moral imperative to fully exploit natural resources, as one would extract all available ore from a mineral deposit or use all the meat, sinew, and bone of a carcass, nor a moral imperative to protect the environment, as one would protect a house or treasure. It is about reconnection, about finding ourselves in nature and nature in us. It is about infusing ecological content (intentionality) into all that is our human world, especially our economy.

Reconnection, to be clear, is not regression, not reverting back to some idealized past that we might call sustainable. Rather, reconnection entails, in the first instance, a recognition, indeed a prioritization, of the knowledge of those who work the land and depend directly on such work, those who cut the trees, haul the nets, pump the water. Theirs is first-order knowledge for sustainable practice; the abstractions of those who measure and model “the environment” and “the economy” yet only distantly depend on that environment and are served well by this particular economy, are second order.⁸

To so acknowledge and accept the knowledge and practices and “economies” of those who depend directly on natural resources is a bitter pill for those who see planetary salvation in more science (read, biophysical, non-human science), smoother markets, more innovative technologies, and tighter, better enforced laws and regulations. Among other things, it requires a certain *humility*. And humility arises naturally and logically from several epistemological systems – experiential (or indigenous), adaptive complexity, the physics and geology of global constraint, limits to social organization, and neurological capacity. As such, humility is central to a sustainability ethic. It is the attitudinal analog to biophysical constraint: to accept limits (biophysical especially, but also social and psychological) is to operate with and within systems that can otherwise be degraded, compromised beyond repair, irreversibly diminished.⁹

Urgency, Wicked Problems, and Risk

The very notion of sustainability implies the existence of *unsustainability*. It suggests that, if the trends continue, they will, for biophysical or social reasons or both, cross thresholds, put in motion cascades of ecosystem decline incurring permanent loss in humans’ life-support system. And because thresholds and cascades in complex systems are highly unpredictable and often irreversible, that is, because they can occur at any time and can be catastrophic, and because there are great time lags between cause and effect, there is *urgency* in the moral imperative for sustainability.¹⁰ Whereas one could always wait to drill the well or cut the forest or designate the park or clean up the waste site, now waiting can be life-threatening.

The urgency arises in part because the environmental changes humans now face are of a fundamentally different sort from those faced in the past. In the past, the problems were getting enough resources out of the mine and forest, getting the money or legislation to set aside special

⁸ Note that the knowledge exhibited by writing – and reading – this chapter is, for the purpose of designing a sustainable society, only secondary, arguably tertiary: it builds on the knowledge both of those who work the land (via case studies, interviews, observation) and of those who develop the scientific models. This fact makes my larger theory-of-sustainability project doubly humbling (the first is to dare claim that society must fundamentally reorganize). The next point regarding humility therefore makes this project triply humbling.

⁹ For a different take on the need for humility, see Jasanoff 2009; also Lasch 1995.

¹⁰ I thank John Chamberlin for identifying urgency as a distinguishing feature of sustainability in the overall environmental problematic.

places, remediating damage to an “acceptable level” and restoring injured landscapes. Today’s environmental problems, the ones that are at the center of the sustainability target (see Table 36.1) are quite unlike those of the past, qualitatively different in time and space and, as a result, in human decision-making. Today’s problems are “wicked problems,” with qualitatively different risks.

Wicked problems create human vulnerabilities qualitatively different from those of the past. With a growing global population, increasing inequality, freewheeling technological experimentation, migration, persistent and accumulative toxicity, and climate disruption, wicked risks throw into question the ability of conventional policy-making in an industrial society to steer a different course. What is more, unlike early industrial risks, says sociologist Ulrich Beck, those of today’s risk society, for instance the “nuclear, chemical, ecological and genetic engineering risks (a) can be limited in terms of neither time nor place, (b) are not accountable according to the established rules of causality, blame and liability, and (c) cannot be compensated or insured against.”¹¹ Such institutionally novel risks are “exemplified by a single example,” says Beck: “the injured of Chernobyl are, today, years after the catastrophe, not even all *born yet*.”¹² Perhaps the best evidence for increasing vulnerability and proliferating risks is the expanding scope of uninsurable risks as determined by the private insurance industry, especially reinsurance.¹³

Urgency also follows from a defining characteristic of the sustainability goal, namely distant time horizons, both into the future and into the past. Time lags between cause and effect, whether anthropogenic or not, can far exceed conventional decision-making modes (legislation and capital investment, for instance). To enhance that decision-making, a look into the past, ecologically, geologically, and historically, can offer insights and lessons. It is in the past, after all, where uncertainties have been eliminated, where the only question is how to best explain what has certainly happened (a sedimentary layer of rock has formed, a species has adapted to a habitat, a river has cut its channel). And, from a social perspective, it is in the past that we can discern the strengths and weaknesses of human decision-making – for example, empires collapse, peasants adapt.

So while previous ethics have been primarily forward looking – to the next forest to cut, the next pollutant to clean up – the sustainability ethic is Janus-faced: to address wicked problems of a risk society with long time horizons, decision-makers must look both directions; and they must look far and wide, paying close attention to cause and effect however separated they may be, however much they may be obscured by political or commercial structures.¹⁴

The backward gaze, moreover, can be through, say, a lens of technological achievement or a lens of adaptive response to environmental and social change. If the technological view has been enabled by an “empty world,” a world where human impact via population, technology, and consumption rates is minor relative to the regenerative capacities of natural resources and

¹¹ Beck 1992, 31.

¹² Beck 1992, 31; original italics. The same can probably now be said of northeast Japan.

¹³ Beck 1992. Political theorist Hugh Dyer notes that insurance and reinsurance are reliable in part because of commercial selection: if they’re wrong, they’re out of business. At the same time, Dyer notes, they have little incentive to reduce risks. Personal communication, February 19, 2007.

It may also be that it is precisely in the realms of the uninsurable that insurance companies either exclude such risks from their portfolios, leaving them to governments and taxpayers or future victims to absorb, or they push for risk-reduction measures. On the last count, insurance companies were apparently the instigators of public fire departments, at least in the US, and now rezoning in disaster-prone areas.

¹⁴ For elaboration of political and economic structures that obscure full costs of human action, see Princen 2002.

waste sinks,¹⁵ then few lessons will be found there (except, possibly, what *not* to do). The adaptive response view, by contrast, may offer lessons in institutional design, however far back in history it goes. In fact, the longest-standing institutions may offer the greatest lessons regardless of governance structure and technological level. The Egyptians' 5,000-year history of living *with* the Nile would be a case in point.

A word of caution regarding the backward gaze is, however, in order. The contemporary environmental problematic has novel conditions never experienced by humans. Humans are adaptable but the great asymmetries between rates of biophysical and social change are unprecedented. Combined with multigenerational time lags, synergistic and threshold effects, irreversibilities and non-substitutabilities, more of the same only cleaner and greener, with better-crafted laws and regulations, even more clever technologies (for example, geoengineering to cool the planet), and new markets for renewable energy are unlikely to be enough.

In sum, whereas natural resource ethics (dominium and utilitarian conservation) appeal to basic needs and wealth creation, and environmental ethics (preservation and environmental protection) appeal to a love of nature and the human right to a clean environment, a sustainability ethic appeals to self-preservation, for individuals, for groups and for the species. A sustainability ethic appeals to a concern for permanent diminution of well-being, even to the fear of insufficient necessities – food, water, shelter, transportation – and an unstable, life-threatening climate. With natural resource and environmental ethics, a failure to realize the value of protecting the environment means that other values can be realized – economic development, consumer choice, mobility, housing. With sustainability ethics there is no corresponding set of values realized with *unsustainability*, not in the long term anyway. In fact it is precisely the negative side of sustainability, the expected loss, that drives the sustainability agenda and gives it its urgency. From the perspective of complex adaptive systems where irreversible decline is always a possibility, where fragility is as pervasive as resilience, a failure to realize that a sustainable outcome means, at best, that current values realized in business-as-usual growth, convenience and speed are prolonged, *then* they diminish along with the sustainability values.

Put more graphically, whereas natural resource and environmental ethics presume a trade-off, a sustainability ethic presumes a cliff. My environmental friends and I work to save a forest, but when the developer wins and houses, shops and factories are built, the environmental values we supported have been replaced by the economic values of employment, housing and goods and services, not to mention tax revenue. I move into my dream home, my children get jobs, and groceries are near at hand. An environmental ethic in particular engenders a competitive, interest-group politics whose values are at odds with the dominant set of values, what can be lumped under the term “economic development.” Environmentalists do battle with industrialists in legislatures, courts, and the media; sometimes they win, sometimes they lose, but most often they strike a deal, they compromise, they come half way, realizing a gain here, making a concession there. There is always a trade-off.

A sustainability ethic, by contrast, zeros in on precisely that which cannot be compromised – a town's water supply, a nation's fertile soil, a planet's climate-stabilizing atmosphere. It sees these ultimate sources and sinks as foundational, as inviolable, indeed, as sacred. And where the sacred enters, the trade-offs, the marginal exchange rates, the pricing and trading and commercializing leave off (see Table 36.1).

¹⁵ Daly 1996.

A comprehensive treatment of this sustainability ethic would include a normative framework of principles, worldviews, and metaphors, all for the practical purpose of facilitating a transition away from ecological catastrophe and toward social and ecological sustainability. Here, though, having distinguished the sustainability ethic from other ethics, environmental and otherwise, I only develop a provisional set of propositions starting with three features that distinguish sustainability as a social goal and ending with a concept of threat.

Sustainability's Three Imperatives

A sustainability ethic can be established not only by distinguishing natural resource and environmental ethics, but by considering how the goal of sustainability differs from other large social goals. I identify three distinguishing features:

1. Sustainability spans *long time periods*, long ecologically and geologically.
2. Sustainability targets the intersection of *social and biophysical systems*; it aims at the interactions, the information feedback loops, the cross-system relations, the perceptual and conceptual connections of the *ecology* of the two systems.
3. Sustainability is sensitive to *scale*, both multiple levels of scale (cellular to organismal to community to biospheric, for instance) and inadequate or excessive scale (too small or too big to self-perpetuate).

A sustainability ethic, then, centers on three corresponding human imperatives – long time horizons, self-management, and optimal scale. Each has its implicit “ought,” its set of rights and obligations.

Long Time Horizons

As discussed, a central conundrum in the global environmental problematic is the necessity of acting for the long term. And that long term is not just the time to the next quarterly earnings statement or to the next election. It is the time to account for biogeochemical processes (for example, soil loss, groundwater drawdown, toxic substances, CO₂ accumulation) and the time lags between human causes and biophysical effects. On the face of it, humans are seriously handicapped in their ability to think about and act for the long term.¹⁶ What is more, past ethical frameworks only obliquely accounted for long-term obligations. In their time, there was always another forest to clear, a river to divert, a dumpsite to fill. Moving on was the answer to shortage.

If there is a principle of the long term in contemporary life it usually amounts to little more than a plea: we should act now to curb emissions because we owe future generations a stable climate. This may be adequate for believers, for those already committed to stabilizing the climate and arresting degradative trends. But it offers little guidance for non-believers or for those who suspect that climate change is real yet have only, say, utilitarian ethics to draw on with the associated cost projections and cost–benefit analyses.¹⁷ So what would a *socially meaningful* notion of the long term be as a key component of an ethic of ecological sustainability?

Ecological sustainability takes on meaning when the timeframe is relevant to ecological, even geological processes. For decision-making to span such time scales, today's decision-makers

¹⁶ For evidence to the contrary, see Princen 2009.

¹⁷ I say “only” cost–benefit analysis because, to date, the conclusions of economic analyses of climate change and mitigation span the spectrum from doing nothing to investing heavily. The variation is all in the assumptions, that is, in the worldview of impacts, technological salvation, and ecological capacity.

need not “value” the conditions and state of existence of future decision-makers. The most obvious reason is that, for so many issues, they cannot: I cannot know how valuable to my grandchildren would be a free-flowing river with fish runs versus a dammed river with hydroelectric power. Furthermore, it is hard enough to assign values in decision-making for today, for this business cycle, for the next election, under any circumstances but full consensus or competitive markets.

Rather, the value of the distant future to today’s decision-makers is the impact a long time horizon has on *today’s society*. It is what a long time horizon in *contemporary* society does to enhance *contemporary* individual well-being, societal cohesion, a sense of national (or cultural) purpose, a correspondence between societal aspiration and societal achievement. Decision-making “for the future” is really decision-making for now, for us, for young and old and, say, for another generation or two.

This is the position inherent in stories about an old man who plants a tree, knowing he will never see the tree in its full grandeur; about the noble sacrifice soldiers make defending the homeland, firefighters make protecting life and property, parents and grandparents make investing in their children; about the wisdom of those who craft a constitution that lives for centuries; about patrons endowing a professorship or funding an art museum. These stories show us how doing such things enriches our lives, elevates us, gives us a higher purpose, and how they do so for the present, not the far future.

This decision-making-for-now view of the long term is hard to see for those who habitually apply a banking metaphor to such issues. For them, interest rates and discount rates convey the value of the future. Those rates are presumed positive, meaning the future is always valued less than the present. To speak of zero or negative discount rates is to enter a fantasy land: what bank, what investor, what trader would conduct business in such a manner?¹⁸

But apply a different metaphor and we see that the goal of sustainability is not usefully analogous to capital expenditure and accounting. A maturation metaphor (bodily, mentally, and emotionally), for example, would suggest that humans develop – that is, they increase their capacities to lead rich, meaningful, secure, safe lives – to the extent that they:

1. reach beyond themselves and their selfish desires and attempt to engage others; and
2. move beyond immediate self-gratification to long-term anticipation and fulfillment.

To mature, in short, is to be empathetic and future oriented. It just so happens that humans are biologically disposed to develop these very traits.¹⁹

A second metaphor preferable to banking is inheritance. Who we are individually and collectively derives from our past. Genetically and culturally it is the information, the codes, the traditions, the institutions that shape us. What is more, *personal integrity*, one’s sense of well-being, competence, purpose, and *societal integrity*, the coherence and acceptance of society’s rules and norms, depend on the success of:

1. building on the past, including the distant past; and
2. adapting to the present, to the environment, biophysical and social, that simultaneously constrains and offers opportunity.

¹⁸ It is probably worth noting that since originally writing these lines – in 2007, before the 2008 global financial crisis – things seem to have changed. In the US, effective interest rates for large banks are essentially zero and negative rates have been reported. What it all means for the near term, let alone the far term, is an open question.

¹⁹ Princen 2009.

A long-term orientation, then, goes in two directions – the distant past and the far future. Its focus, however, is and only can be, practically speaking, the present.

This decision-making-for-now view of the long term affords at least two practical reasons for instituting a long-term perspective in decision-making. The first is, somewhat paradoxically (especially for those habituated to banking metaphors), the immediate, experienced benefits of living in a society that commits resources to the distant future. Consider a society that does not, one that writes five-year plans but not an enforceable constitution, that provisions an army only when there is a threat, that puts out fires only for those who can afford fire insurance, that cuts trees but does not replant, that neglects its children and elderly. It is hard to imagine that such a society would last for long, let alone be a pleasant place to live. Social integrity and personal well-being would be very low, even if its members enjoyed immediate gains from their short-term, exploitative behavior.

A second practical reason is that humans are quintessentially social creatures, with both spatial and temporal capacity. From our neural structures to our cultural structures, we engage each other, we put ourselves in others' shoes, we sacrifice for the good of the order. That our sensations and concepts extend beyond the individual self on a spatial dimension suggests that it does so on a temporal one as well.²⁰ That is, cognitively, we cannot process time *per se*. It is a mental construct built on our spatial capacities to distinguish locations and to detect motion.²¹ So if we sense and construct our world spatially via those around us (the child almost literally sees its world from the parents' perspective), then it is but a simple logical step to say that we sense and construct our world temporally too. Just as we look to the horizon in front of us to "see" the future, we look to the path behind us to "see" our past. We extend the here and now to the distant past and far future. This is, indeed, who we are.

Proposition A principle of the long term in a sustainability ethic says that a social act is good when the current generation willingly and intendedly protects and enhances the well-being of future generations. And members of the current generation do so not because they deny themselves or because they have effectively calculated the intergenerational trade-offs, but because such acts enhance their well-being, including their self-image, identity, sense of purpose, and connections to others, to natural systems, and to the past.

Self-management

Self-management says that one manages one's *relations* with other systems, not other systems themselves. As a fisherman, I manage my nets and boat speed, not the quantity and distribution of catch species. As a forester, I manage the harvest rate and road building, not the germination and exposure of trees. As an irrigator, I manage my pump rate and crop selection; I do not divert more and more water my way.

The self-management principle goes straight to the issue of reconnection. It is deceptively simple, in part because in environmental thought it is a cliché to say that, at root, the environmental problematic is humans' separation from nature and that people should find ways to connect. Self-management still takes as separate, or identifiable entities, human systems and biophysical (non-human) systems. Unlike conventional yield approaches, though, it does not treat the fishery or forest as a laboratory to be experimented with endlessly,

²⁰ Abram 1996.

²¹ Lakoff and Johnson 1980, 145–6.

as a colony from which resources can be extracted until exhausted, or as a warehouse with constant restocking.²²

Proposition A principle of self-management in a sustainability ethic says that good relations with natural systems start with the *management of human behavior* – extraction, deposition, renewal. The more those relations aim to fit within regenerative capacities, the more likely they are to contribute to a sustainable system.

Optimal Scale

The third component in an ethic of sustainability is scale. One aspect, primarily analytic, is the necessity of multiple scales: a problem that comes under the sustainability rubric must be addressed from the interpersonal to the international, from the organismal to the ecosystemic, even the planetary. The other aspect, also analytic but also ethical, follows from the self-management imperative. This is optimal scale, the idea that systems must operate within a safe range; to push one parameter (for example, water input, nutrient loading, rate of reproduction, speed of movement) too high or too low jeopardizes the entire system (and connected systems). Hypoxia zones in marine ecosystems and financial bubbles in economic systems are cases in point.

The general principle here is that, although individuals or groups will act out of their own self-interest, to do so in a way that jeopardizes larger systems – a fishery at the mouth of a river that cannot assimilate nutrient loading from agriculture; a banking system that cannot handle debt loads from esoteric financial instruments – is, over the long term, self-defeating, for the individual, for the group and, in some cases, for larger society.

This, then, is the imperative of optimal scale on a spatial dimension. On a temporal dimension, individual action now may be rewarding but if it jeopardizes others via larger systems then this, too, from the long-term perspective, is self-defeating. Fossil-fuel combustion is the archetype.²³

Therefore, a principle of optimal scale for an ethic of sustainability is different from an efficiency of optimal scale. A machine performs best when its speed stays within a safe range. Firms, according to standard microeconomic theory, operate most profitably at an output level where marginal costs equal marginal revenues in the short term, and where average total costs are lowest in the economically long run. In these cases, optimal scale is a principle for maximizing system output – torque and profit, say. There is no temporal dimension. But where the system goal is to ensure resource and waste sink capacities for the ecologically long term, the optimal scale principle points to the ecological and social conditions for self-management. It is, first and foremost, about ensuring livelihood and well-being for the indefinite future, for life support, and for humans and other species.

Life-support systems therefore cannot be put at risk. As a manufacturer, I may push my workers and machines to maximize profits or gain market share or lure investors. If my operation is a minor part of the larger system – the product market, the financial markets, the economy – then the risk is primarily mine. But if the scale of my operation is such that others, now and into the future, depend on my continuing success, if it is such that the risks I take are

²² For elaboration of the self-management principle, see Princen 2005; and of the use of language, especially metaphor, in the construction of the environmental problematic, see Princen 2010.

²³ For a preliminary articulation of the current ethic of fossil-fuel use, and a proposal for their future use, see Princen 2011.

the risks others incur, or that my risks (to, say, my privately owned forest or to my financial capital) is qualitatively different from the risks I impose on others (to the watershed or to the financial system), then I have exceeded an optimal scale; I have endangered more than that which is my own. An ethic of sustainability demands that I stay within a safe range, if not for my operation (that is my choice, my self-imposed, self-incurred risk), then certainly for the larger systems, biophysical and social, on which my operation depends.

Proposition A principle of optimal scale in a sustainability ethic says that an individual or group or nation cannot run its operation so fast (or so slow) or so big (or so small) that it jeopardizes the larger systems, biophysical and social, in which it is embedded.

The Threat

In the preceding, I have argued that a sustainability ethic can be partly established in the negative (that is, it is not natural resource and environmental ethics) and partly via its distinguishing features (long time horizons, self-management, optimal scale). Neither approach entails a sense of urgency, what in the present climate is self-evident to those who follow the science and biophysical trends. So I finish by elaborating a role of “threat” in a sustainability ethic.

Sustainability is, in the first instance, about survival, about ensuring biophysical life support for humans and other species over the long term, the socially, ecologically and geologically long term. Avoiding that which threatens life support is the overriding goal of policy and behavior change. So the nature of the threat is crucial, as well as the language. In fact, in much of the sustainability debate it is at this point that the metaphor typically shifts from the medical (intensive care) to the military (“international war on the greenhouse effect,” as US President Bill Clinton once put it).²⁴ The military metaphor presumes an “other,” a foe to be vanquished, an attacker to be deterred, a heathen to be civilized. It cannot deal with the possibility that, with a problem as complex and pervasive as unsustainability, all societies and all individuals are implicated, especially those in the high-consuming, industrial North, precisely from where the military metaphors tend to emanate. So the threat here is necessarily “the enemy.”

Another common construction of the threat is just the reverse. It is “us,” that is, us individuals, as in, we have met the enemy and it is us. This construction individualizes what is inherently a collectively generated problem. It says each of us chooses to consume resources and emit wastes. At one level this is, of course, true. But it ignores how powerful institutional forces – norms, laws, regulations, political favors, media attention – shape those choices, how they make oil cheap, packaging ubiquitous, chemical experimentation on the environment normal, and atmospheric deposition costless.²⁵

If the threat as either “the enemy” or “us individuals” is problematic, how should it be construed? Taking as given that the problem is systemic, a proposition all serious students of the global environmental problematic seem to agree on, then the threat itself must be construed systemically. The first-order system of concern is the biophysical, the life-support system of humans and other species, the material foundation upon which all other systems, material and nonmaterial rest. The second-order system of concern is social, the mutual understandings, norms, symbols, rituals, and rules that hold a society together. As with all systems, the

²⁴ For many more examples of leaders in the US and the UK, left and right, using military metaphors with regard to climate change, see Cohen 2010.

²⁵ On individualization, see Bellah et al. 1991; and Maniates 2002.

biophysical and social each has its set of goals, each seemingly operating independently of the other. In fact, the project of industrialization can be characterized as precisely that – a grand effort to separate human functioning from the constraints of nature.

The project of “sustainabilization,”²⁶ by contrast, is one of reversal, of reconnecting natural and social systems. Reversal, I should stress, is not regression, not returning to primitive ways; we could not if we wanted to. It is moving in a different direction, away from the alienating, the disconnecting, the distancing, the “man-apart-from-nature” constructions and toward connecting, engaging, integrating constructions of biophysical–social relations. Some of that reconnecting no doubt will be reminiscent of earlier times – growing a portion of one’s own food, for instance. But much of it is discarding that which is demonstrably unsustainable – eroding soils, groundwater overdraft, fossil fuel combustion – and devising new ways of growing food and supplying water and heating and transporting ourselves. To imagine those new ways requires an ecologically grounded worldview, principles of social organization, and a language with metaphors of an integrative environment; topics I do not take up here.

Proposition The overarching concern in the goal of sustainability is threat to survival where, over time, no actor, however powerful, knowledgeable, or wealthy is exempt. Because the global ecological problematic implicates everyone in the generation of those threats (although certainly not equally), actions to protect privileged subsets of actors (for example, powerful nations, elites) must necessarily protect all actors.

Some practical implications of long time horizons, self-management, and optimal scale are given in Table 36.1.

Table 36.1 Targeting sustainability as a social goal: a conceptual map of intervention

1st Order: The Core

Avoiding:

- *irreversibilities
- *non-substitutabilities
- *“surprise” (discontinuities, synergies, unnoticed trends)

2nd Order: Subsystems

Implementing:

- *sustained yield
- *soil build-up
- *underdrafting
- *waste deposition below assimilative capacity

3rd Order: Structures and Processes

Engineering:

- *efficiencies
 - *recycling
 - *closed loop production
 - *life-cycle integration
-

²⁶ I thank Paul Princen for coining this term.

Interventions into the current order, that is, into an industrial, fossil-fuel-based, consumer-driven, growth-oriented society to achieve the goal of sustainability, aim at a three-ring target.

At the core are those issues characterized by irreversibility and non-substitutability, in short, by permanent loss, unrecoverable degradation. If the system is not corrected for such effects, all other interventions for all other purposes (for example, economic growth, democracy, justice) are moot: the system cannot sustain itself.

Next in importance are those interventions limited to specific subsystems – for example, forests, fisheries, grasslands, watersheds, coral reefs – that have demonstrably limited regenerative and assimilative capacities. Here, interventions aim at keeping human use within those capacities – for example, harvest less than regrowth, withdraw less than recharge.

Third in importance are interventions that rebuild existing structures and processes to minimize resource use and waste generation. By themselves, efficiencies, recycling and the like can only slow a degradative trend. But because they are generally compatible with existing practices and understandings in the current order, they are less threatening to established interests. Politically, therefore, these interventions can support the higher-order interventions. *Ecologically* and, ultimately *ethically*, the higher-order interventions have primacy.

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37 The sustainability debate: *déjà vu* all over again?

Ronnie D. Lipschutz¹

What can be said about *sustainability* that has not been said before? Is the term defined today with any more precision and specificity than in the past? Does “sustainability” denote a process or a goal, and has progress toward it been achieved? After 30 years and an extended period of eclipse, should we pay attention to sustainability? To be sure, sustainability has returned with a vengeance. It has become an all-encompassing watchword for environmental policy and practice, for production and consumption, for urban planning and rural extraction. It is pursued by universities, think-tanks, communities, corporations, and governments around the world. It is the silver bullet that will save the world ... or will it? In the background to the term can be observed many of the terminological struggles and controversies of the past 50 years, including “limits to growth,” “the population explosion,” and “environmental security.”² Whatever it is or does, sustainability continues to confuse and confound, being applied in contexts as diverse and distinct as military strategy, financial stability, and the world’s environmental future. My goal here, therefore, is to assay and analyze the “sustainability debate,” drawing not only on contemporary usages and practices but also extending the investigation into the realms of science and engineering. Whether sustainability represents something new in contemporary use and practice, or is nothing more than “*déjà vu* all over again,” might become clearer by the end of this chapter.

I begin with a brief discussion of the history of sustainability as a concept, one whose general sense can be traced back as far as the mid-nineteenth century,³ but which did not enter the more general environmental lexicon until the 1980s. I focus, in particular, on more recent usages, as the term appears in several diverse disciplines and policy circles, teasing out some of the obvious (and not-so-obvious) contradictions among competing usages. Then I consider the major approaches to sustainability and offer some thoughts and ideas about operationalizing it in a practical and meaningful sense. As a report on a concept, this chapter is by no means complete or comprehensive; at best, it covers only a fraction of the relevant literature.

What is this Word, Sustainability?

The word “sustainable” appears to have been first used in “maximum sustainable yield” as applied to exploitation of fisheries.⁴ Its wider usage began during the 1970s – in the title of a book edited by Dennis Pirages⁵ and, subsequently, in the 1980 *World Conservation Strategy*⁶ – and since then, the term has been applied in many different ways. The canonical definition

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² Lockwood 2010–11.

³ Marsh 1847; Osborne 1948; and Brown 1954.

⁴ Russell 1931.

⁵ Pirages 1977.

⁶ IUCN 1980, Sec. 1, §2, 3, 4.

of “sustainable development” was offered in 1987 by the World Commission on Environment and Development (WCED, aka the Brundtland Commission) in *Our Common Future*:

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. The concept of sustainable development does imply limits – not absolute limits but limitations imposed by the present state of technology and social organizations on environmental resources and by the ability of the biosphere to absorb the effects of human activities.⁷

Where the WCED sowed confusion was in its proposition that only massive growth in the global economy would make sustainable development feasible, an argument convivial to the growing influence of neoliberalism but flying in the face of earlier warnings about “limits to growth.” In failing to resolve what, even today, appears a fundamental contradiction, the Commission shifted the focus of debate and policy from programmatic to definitional arguments, with the latter never satisfactorily resolved.⁸ Over the ensuing two decades, a great deal has been written about sustainability,⁹ and a myriad of projects and programs has been dedicated to it,¹⁰ without anyone getting much closer to either definitional closure or concrete accomplishments.¹¹ Most analyses tend to report on what has been done and what *must* be done, but fall short in describing *how* to achieve the sustainability they so desire. Indeed, one can point to a plethora of such studies and analyses stretching back several decades, with only differences in titles and keywords to indicate when they were published.¹² As far as concrete accomplishments go, the record is diffuse, fragmented and somewhat equivocal. Whether this is a definitional problem or a measurement one, or both, has yet to be resolved.

This is unfortunate, inasmuch as we are now, once again, in the midst of a revival of “sustainability,”¹³ most visibly on university campuses,¹⁴ in urban planning,¹⁵ and in industrial ecology.¹⁶ These tend to fall into three related yet somewhat distinct approaches: first, sustainability through “green growth” via technological innovation and ecological modernization; second, sustainability via “green reform” of individual and corporate behaviors through market mechanisms; and third, sustainability by way of “green transformation” of cultural meanings, individual identities, and social practices in order to modify supply and demand, infrastructures and inputs. These are discussed below.

Green Growth: Technological Innovation and Ecological Modernization

“Green Growth” relies largely on “fixes” – technological, economic, and biological – to modify the impacts of human activities on the earth’s natural resources and ecological systems.¹⁷ Such fixes could include new technologies, internalization of impacts, and development of biomass-based substitutes for non-renewable resources. These will, it is argued, foster progress and

⁷ WCED 1987, 8.

⁸ Redclift 1987; Norgaard 1988; Lélé 1991; and Lipschutz 1991.

⁹ Redclift 2005.

¹⁰ Ford Foundation 2008; UN DESA/UNEP 2009; and World Bank 2009.

¹¹ Luke 2005; and Khan 2008.

¹² Curry-Lindahl 1972; Myers 1983; and Mittermeier et al. 2000.

¹³ For example, Dresner 2008; Heberle and Opp 2008; Hinrichs and Lyson 2008; Sherman 2008; Speth 2008; and Szokolay 2008.

¹⁴ Bartlett and Chase 2004; and Sherman 2008.

¹⁵ Heberle and Opp 2008; and McKendry 2011.

¹⁶ Hertwich 2005; and Jackson 2005.

¹⁷ Kates 2010.

sustainability without requiring much in the way of changes in people's behaviors and social practices. Thus, ecological modernization,¹⁸ environmental preservation/restoration,¹⁹ and low- or no-pollution energy and decarbonization strategies²⁰ seek to reduce material flows into and out of production, consumption and disposal. A new energy source can replace a carbon-intensive ones, taxes and charges on noxious gas emissions will raise the prices of goods and services leading to lower consumption, organic agriculture will reduce chemical impacts on soil (with similar reasoning for other forms of resource use and waste production).

Advocates of "ecological modernization"²¹ make such claims. As new systems of extraction, transportation, manufacturing, and consumption are developed, processes and products can be designed and deployed that, rather than dealing with "end-of-pipe" pollution, require fewer inputs, use those more efficiently, and generate lower levels of waste streams. Money will be saved on the input side and any higher costs can be internalized in the price of goods, services, and waste disposal, making consumers more frugal. But there are some serious flaws in this logic.²² First, production efficiencies can be canceled out by larger numbers of units – such as automobiles and electronics – consumed. Emissions may be displaced from the individual unit (tailpipe) to the power source (power plant, in the case of electric vehicles). The "rebound effect" may result in increased consumption as the cost per unit declines and as the global economy expands.²³ Thus, even with ecological modernization and compulsory recycling programs, rising incomes around the world will lead to growing quantities of wastes and pollution through the "treadmill of production" and consumption.²⁴ Whether the technical fix can succeed is not at all clear. Biologists and wildlife ecologists often fall into the same trap, seeing sustainability in terms of species conservation, especially in the face of adverse conditions of adverse human development, intrusion, and utilization.²⁵ But protected status does not necessarily accomplish that goal, as illustrated by the sad case of ocean, coastal and inland fisheries.²⁶ No particular social context is assumed, and legal restrictions are all that is required.²⁷ What this approach generally fails to recognize is that not everyone is willing to accept even relatively small instrumental changes in their lives with equanimity. Resistance is ubiquitous.²⁸

Green Reform: Changing Individual Incentives and Consumer Behaviors

A second approach to sustainability is more cognizant of the importance of "human factors," although these are frequently treated as the tail on a very technological dog,²⁹ with a focus on "greening" social institutions, especially markets.³⁰ Sustainability requires newly devised norms, regulations, incentives and laws devised to promote the general social "good" of long-term human prosperity. Better information, appropriate education, and enlightened interests

¹⁸ Mol 2001, 2002; and Orsato and Clegg 2005.

¹⁹ Mitsch and Jørgensen 2004.

²⁰ MacKay 2009.

²¹ Mol and Sonnenfeld 2000; Mol 2001, 2001; Carolan 2004; and Cohen 2006.

²² York and Rosa 2003; Jackson 2005.

²³ Gavankar and Geyer 2010; Owen 2010; and Tierney 2011.

²⁴ Gould et al. 2008.

²⁵ Rockwood et al. 2008.

²⁶ Russell 1931; Anderies et al. 2006; Helfman 2007; and Delta Stewardship Council 2011.

²⁷ Hirsch 1977; and Jackson 2005.

²⁸ Bauer 1997; and Whitfield et al. 2009.

²⁹ Winner, 1988; and Smith and Stirling 2008.

³⁰ Dillard et al. 2009.

will, together, raise producer and consumer consciousness, trigger popular demand for rational laws and necessary policies, and bring about sustainability. But “interests” are not that easy to specify nor is it certain that consumers will accept regulations and laws deemed necessary for sustainability (and formulated by whom?). Specifically, interests have much more symbolic content than is generally recognized, and are often associated with ideologies and identities in ways that are not easily disaggregated. Indeed, some research suggests that identities precede interests, with the former shaped more by meanings and symbols than by markets.³¹

Second, it is not evident that information and education actually lead people to recognize their “true” interests. Here, we must distinguish education from socialization. The latter begins in an individual’s early formative years and is accomplished through schooling, religious instruction, culture, social narratives, and media, leading to “naturalization” of beliefs and practices, such as “more goods means greater happiness” and “it is good to consume.” Education, by contrast, relies more on critical thinking (and skepticism) in the face of the many truth claims made in markets, media, and culture. The inculcation of radical skepticism via education may actually contribute to cultural conflicts and resistance to change, as seen in struggles over environment and economy. People “learn,” but they do not necessarily learn what leaders, experts, and policy-makers would like them to.

Green Transformation: Meanings, Identities, Practices

A third approach to sustainability pays close attention to “culture” and “meanings,” and their role in identity construction.³² There is no society without symbols and signifiers, closely linked to real, material lifeways. People relate to each other and to the material world not only to survive but also to maintain the societies and social orders in which they live. They rely on cultural signifiers and meanings giving purpose and direction to life. “Sustainability,” therefore, rests on major transformations in concepts, meanings, and practices that may well be incommensurate with historical, normal behaviors, orders, and infrastructures. New or different ways of thinking and doing are not evidently “better” or more rewarding or enlightening; they are different and may not “fit” into that regarded as normatively natural. Social change and transformation are always disruptive and disturbing.³³

How might such transformations come about? Adrian Parr examines how “sustainability culture” has penetrated various segments of American society, especially the upper middle class.³⁴ Participants in this culture have begun to alter collective behavior through changes in signifying practices – for example, on the basis of social recognition of hybrid and electric cars and the infrastructural changes that could result – although we should recognize that such new social practices are readily commodified, becoming new opportunities to produce and consume. Nonetheless, that “sustainability” has become a signifier for a deeply felt and growing need to do something other than consume mindlessly is not an insignificant matter, and such examples show that people can be actively involved in shaping, transforming, and giving new significance to social being and social relations.³⁵

Three points can be made here. First, beyond basic subsistence, human social and cultural practices are strongly shaped not by how much we consume and abuse ecosystems, but what

³¹ Jackson 2005.

³² Jackson 2005; Parr 2009; and Lipschutz 2012.

³³ Marx and Engels 1848 [1969]; and Berman 1982.

³⁴ Parr 2009.

³⁵ Jackson 2005; Jones et al. 2010; and Lipschutz 2012.

end and meaning we give to such actions.³⁶ Function is not merely about functionalism. In seeking broad change in social behaviors and practices, it is necessary to address not only institutions and technologies but also social and cultural signifiers. As an example, it is not enough that we drive more energy-efficient automobiles or even that we drive them less; rather, we need to normalize and internalize a new ethic of automobility that differs from today's highly individualistic one. It does not hurt to drive gas-sippers, but the very meaning of being able to drive wherever and whenever one wants must change.³⁷

Second, there is a difference between short-term, instrumental changes brought about by rising costs, prohibitions, and more-efficient technologies, and long-term and lasting changes arising from the deep internalization and adoption of new social norms, practices, and materialities. We may well drive less as gasoline becomes more costly but, in the absence of truly radical and sustained price increases, transformed behaviors are unlikely to continue for very long.³⁸ By contrast, if the *habitus*³⁹ of mass transit and reduced mobility can be internalized as normalized practices rather than “free” choices, reversion to old ways is less likely.⁴⁰ Humans are not cybernetic automatons like thermostats; they can be socially “guided” to alter customary practices.⁴¹

Third, there is room for the technological and policy “fix,” if only to ease the strains and tensions inevitably associated with deep transformations in social signifiers, practices, and commitments. A fuel-efficient car and a well-insulated (and modest) home can facilitate lower impacts on ecology and environment and contribute to long-term sustainability. Even these, however, rest on changed (govern)mentalities about what it means to be mobile or warm (or both), and probably changes in identity and place in community, as well.⁴² There are examples to which one can point that illustrate how such changes come about – the disappearance of social smoking since 1960 – but what is entailed specifically in such change is much less clear.⁴³ There is a considerable research agenda to be developed here.

Implementation and Policy

Today, there is much talk of sustainability, but are there any evident policies or resulting impacts? If we take a rather broad view of what “sustainable” means, considerable effort has gone into sustainability, with only limited documented successes. This is hardly surprising; even after decades of climate science and politics, there is hardly a consensus on how to measure greenhouse gas emissions and reductions with precision or even what is to be done about global warming. There is little doubt that sustainability is a driving factor behind the greening of cities, the attention paid to the environmental impacts of development projects, the push to create green industry, and the green jobs that go with it.⁴⁴ But as suggested above, these projects generally treat symptoms rather than causes, and involve only limited efforts to transform the behaviors, structures, and practices that remain deeply committed to and intertwined with nonsustainable infrastructural and social systems. This might be attributable to the absence of

³⁶ Thompson 2003; and Lipschutz 2012.

³⁷ Böhm et al. 2006; and Paterson 2006.

³⁸ Hertwich 2005; Gavankar and Geyer 2010; Owen 2010; and Tierney 2011.

³⁹ Bourdieu 1985.

⁴⁰ Lipschutz 2012.

⁴¹ Jones et al. 2010.

⁴² Eckersley 2004; and Swyngedouw 2010.

⁴³ Lipschutz 2012.

⁴⁴ Hoffman 2011.

a conceptual definition of sustainability with clearly defined metrics and goals as well as confusion and ignorance about how the myriad different parts of even simple production, consumption and disposal processes and chains-of-custody are linked together.⁴⁵ “Life-cycle analysis” goes part of the way toward this goal, but it does not extend to the social practices associated with goods and services. More to the point, pursuit of “sustainability” within the context of a commitment to global capitalist growth cannot lead to the kind of systemic transformations required.⁴⁶ Here, I assay several approaches to implementation of sustainability: (i) sustainability process versus context; (ii) sustainability through regulated versus free markets; and (iii) social transformation for sustainability.

Sustainability Process versus Context

Under this rubric, we find two, somewhat distinct approaches. The first seeks changes in commodity chains, so that each step in the lifetime of a commodity meets sustainability criteria. One well-known example of such programs is that of the Forest Stewardship Council (FSC), whose certification requires that timber be sustainably produced, that wood materials and products be shipped and shaped according to sustainable practices, and that consumers be informed of the provenance of any FSC-certified wood or wood product purchased.⁴⁷ Although FSC standards may set the pace for other certifying groups, for the moment the fraction of certified forests and goods remains a very small percentage of all the world’s forests and timber products, perhaps because of the higher price of certified materials or simple consumer indifference. What certification has not done is to reduce global consumption of timber or replace wood with materials whose environmental impacts are less (and do such materials even exist?). Moreover, it is even possible that growth in plantation forestry for pulp production and carbon dioxide sequestration, as opposed to conservation and restoration of tropical and temperate forest ecosystems, is decreasing sustainability. The numbers, such as they are, are unclear.⁴⁸

A context approach, by contrast, focuses on the myriad parts of human environments and institutions, seeking to systematically make them sustainable. Urban sustainability is of the first sort, based on programs, incentives, and projects that transform and reduce ecological “footprints.” Cities frequently establish such programs in order to attract “green” business as well as younger, well-paid professionals who will increase the urban tax base and foster gentrification. In doing this, however, urban governments may be driving out lower-income households whose consumption levels are low and reuse levels high, replacing them with households that consume more and dump recently acquired goods on the basis of obsolescence and style.⁴⁹ A more integrated and contextual approach is needed to avoid such outcomes.

Organizations and institutions, buffeted by budget crises and orders from above to reduce spending, often see sustainability as a means of reducing expenditures on the goods (and labor) required to operate. Corporations and universities hire sustainability officers and open sustainability departments (whose employees rarely know what to do). Staff, customers, faculty,

⁴⁵ Swarr 2009.

⁴⁶ This, of course, is a highly contested point; the entire premise of “green growth” rests on achieving an environmentally friendly and socially just form of capitalism. Tom Friedman has been a relentless proselytizer in support of this proposition in *The New York Times*. For a more skeptical view, see Singer 2010.

⁴⁷ Cashore et al. 2004; and Lipschutz 2005.

⁴⁸ Fearnside 2000; and Fahey et al. 2010.

⁴⁹ McKendry 2011.

and students are encouraged to be more conscious of their environmental choices and behaviors. Buying recycled paper, reducing interior building temperatures and lighting, getting rid of dining trays in cafeterias and offering smaller food portions, telecommuting, carpooling, and fewer business trips are all part of such efforts, but they need to be done in a more contextual fashion, focusing on not only the constituent parts but also the overall purpose and structure of the organization.

Of course, many of us live in highly decentralized societies, in which coordination among their many parts is weak or non-existent, and whose primary form of regulatory information is “price.” Both process and context approaches to sustainability are premised largely on the idea of raising the cost of less-sustainable activities, thereby encouraging reduced consumption or substitutability, or lowering the cost of more-sustainable activities, thereby encouraging their increased consumption and practice. Yet, the price “signal” is often diffuse or even lost in the noise. Action is socialized across a relevant agency or unit, with each individual member making a small or even invisible contribution to the effort, with returns captured by the agency or unit, which seeks savings in terms of lower revenue requirements rather than rewards that might be redistributed as incentives. There is no glory in not consuming a kilowatt hour or two hundred sheets of paper, while injunctions to loyalty, commitment, and consciousness will only go so far.

Sustainability through Regulated Versus Free Markets

These observations lead to a somewhat different perspective on sustainability: what is the best way to encourage, or even pressure, agents to “go green,” consume efficiently and waste less? Here, we run into longstanding debates over power, authority, and freedom, and the role of states and markets in changing processes and institutions. In this instance, virtue is replaced by discipline: one changes not because it is the “right” thing to do but, rather, because laws and rules demand it. At one extreme, regulation relies on strong police powers and peer pressure to ensure obedience to the rules – “command and control”; at the other, on self-discipline and self-interest based on “freedom of choice.” In the first, the state takes on the role of defining acceptable practices, policing them and punishing violations; in the second, the state only defines property rights and imposes fees or taxes on non-sustainable activities, largely staying out of policing and assuming that an individual’s failure to fulfill his or her interests is the best punishment and incentive to change.

My focus here, however, is political rather than economic: who decides what rules and laws will constitute sustainability and how it is to be achieved? Neoclassical economists and libertarians generally argue that any imposed regulation constitutes a negative restriction on individual freedom. Internalizing the costs of sustainability allows individuals maximum freedom to purchase just as much sustainability as they can afford, although in the absence of some standard metric to determine the magnitude of internalized costs, there is no practical way to determine which choice yields the most “sustainability.” In a system that operates on the principle of lowest cost and greatest profit, the cheapest goods and services are rarely the greenest, and the greenest are rarely the least costly. There is profit to be made in catering to sustainability, but not that much.

With command-and-control regulation, it is the state, perhaps on the advice of experts, that determines sustainability benchmarks and requirements. This, too, will raise the cost of production and consumption, but the economic aspects of this approach are of less interest than the political ones. All else being equal, if the state seeks to require particular standards of

sustainability behavior from all of its members, whether individual or corporate, it is imposing not only a cost but also an ethic that all must observe and a cost that all must pay (socialization of costs and benefits as opposed to their privatization). To be sure, the specific cost will vary, some might not be able to afford to pay it and others will find ways to avoid payment. In those instances, however, the state can subsidize some costs for the general welfare and in the interest of the polity (and environment) as a whole, and devote resources to preventing cheating and corruption. In practice, these are difficult tools to deploy, especially in liberal states, but they are not impossible. That is why writers Robert Heilbroner and William Ophuls thought a “Green Leviathan” might be both necessary and inevitable.⁵⁰

Can we point to cases of growing sustainability as a consequence of either process or context approaches? The empirical evidence on this count is rather murky, at best. We have the cases of the now-defunct socialist countries which had fairly strong environmental laws and fairly abysmal environmental records. We also have evidence from market societies, in which there have been marked improvements in particular environmental sectors, but only infrequently as a clear result of free markets (sulfur dioxide cap and trade is often cited as a success in this respect, but that is hardly a “free” market in the neoclassical or liberal sense). Finally, we can also point to sectors in which sustainable practices have been deployed without great effect on end results, as in the electronics industry, whose products may be more recyclable than ever but which are being produced and disposed of in ever-increasing quantities. That the choice between the two approaches to regulation for sustainability is a political matter, rather than a purely economic one, seems likely to have been lost in the effort to minimize electoral consequences.

Social Transformation for Sustainability

A third broad approach to sustainability is related to the two preceding ones, but focuses more on individual choices in relation to social practices, perhaps with intervention of both states and markets. At the end of the day, we can ask what motivates the production and consumption of those particular goods and services that work against a transition to sustainability? Changing what are accepted and even required practices is not straightforward if alternatives are not readily available and impose high costs on those who wish to change.⁵¹ “Green consumerism” is one such approach, according to which, if masses of individuals seek sustainable goods and services, the market will have no choice but to respond and, in so doing, will carry societies along. Yet, this logic may not stand up. On the one hand, the availability of “greener” automobiles grows ever greater. On the other, this has had little discernible effect on either oil consumption or automobility, especially as the global demand for cars continues to grow. What, then, could render transport more sustainable? Here is where things become particularly complicated: can such a deeply embedded and integrated social complex be transformed through instrumental changes to its many components? Not only would mobility have to be restructured, both materially and symbolically, but so would living patterns, transportation alternatives, highways, gas stations and auto repair shops, factories and suppliers, tire manufacturing and sales, gasoline refining, and on and on. Where and how could one begin to engineer such a massive change?

In the United States, the automobile is such an integral part of everyday life that it is difficult to imagine its place and status being altered in any significant fashion. Not only does the

⁵⁰ Heilbroner 1991; and Ophuls and Boyan 1992.

⁵¹ Jackson 2005.

infrastructure of American life require a car, but so do consciousness, identity and subjectivity. To be without a car is to be less than a full member of society; certainly, to be carless means that full participation in the normal practices of everyday life becomes difficult if not impossible. Can we imagine a society in which subjectivities and practices associated with automobility make the car a burden or even a reviled object? There is only limited historical or social psychological research focused on such projects.⁵² By far, the vast bulk of technological and sociological research on sustainability ignores the larger social context in which mentalities and practices are embedded. The limited results arising from instrumental approaches suggest a need for much more extensive sociological research, as well the willingness to engage in the “social engineering” (or “soft paternalism”) necessary to change the beliefs and practices of consumers and societies.⁵³ Inasmuch as advertising has been shaping subjectivities for more than 100 years, we might recognize that the required social transformations are not impossible.

Conclusion

We have been down this road before – with “appropriate technology” during the 1970s and 1980s and “sustainable development” during the 1990s – reifying concepts and presenting them as the “solutions.” There is something attractive about being able to name that which must be done, but it does not accomplish very much about the doing. More to the point, unless we learn from other cases and examples in which social transformation did occur, and are able to determine how sociological, cultural, and technological elements came together, sustainability may become just another one of those words that, for a time, was on everyone’s lips but, eventually, vanished, to be replaced by another word offering similar promises.

Ultimately, the challenge to achieving “sustainability” is less about too much or too little and more about why and what: what is it that constitutes the “good life” in the twenty-first century and why finding ways other than simply reducing material impacts on the world is part of achieving this “good.” That, in turn, requires much more attention to politics and less to markets, an approach that appears increasingly unlikely to develop from the top down. Rather, as the pace and scale of local sustainability projects grows – and there is considerable evidence to show that they are growing – the social subjectivities and collective consciousness that must go hand-in-hand with technological innovation and material change may spread.⁵⁴ Whether this will, eventually, bring us to sustainability is something we can only wait to see.

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⁵² Lipschutz 2012.

⁵³ Jones et al. 2010.

⁵⁴ Hoffman 2011.

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38 Transnational environmental harm, inequity and the cosmopolitan response

Lorraine Elliott

Issues about justice, ethics, and equity are fundamental to the ways in which we understand and seek to overcome global environmental change. These challenges require that we specify “the entitlements that people have ... as well as the duties or obligations ... that persons or other agents are bound by to respect these entitlements.”¹ Yet “ethical reflection on international environmental affairs is in its infancy”² and equity-based norms have not had a strong impact in global environmental governance.³ One starting point for addressing these challenges is to understand environmental degradation as a particular form of transnational harm that results from environmental displacement. This harm, in turn, is characterized by forms of inequity in which the lives of “others-beyond-borders” are shaped without their participation and consent. These transactions of harm therefore extend the bounds of those with whom we are connected, to whom we owe obligations and against whom we might claim rights. They create, in effect, a cosmopolitan community of reciprocal rights and duties which, as Andrew Linklater⁴ points out, transcend the “morally parochial world of the sovereign state.”

The question of how best to respond to this kind of inequity has both ethical and political dimensions. The purpose of this chapter is to examine whether and in what ways ideas drawn from cosmopolitan thought can provide a normative basis for a global regime of rights and duties which responds to the harm inequities associated with environmental degradation. Cosmopolitan principles are understood here as those that acknowledge a global community of humankind based on a structure of mutual recognition, solidarity and equal moral worth, and that recognize global justice among peoples as well as among states as a fundamental objective of international political practice. As an ethical project, cosmopolitan thought – in its stronger or thicker version – establishes at least three conditions for an equitable and just form of global environmental governance. Moral obligation across borders must be recognized, there must be some form of compensatory burden sharing (that is, redistributive rather than simply distributive justice), and governance must be based on a politics of consent. This is not simply an intellectual account of the good political community in which, as Hayward puts it, “moral aspirations are treated as separable from their ‘contingent’ material conditions of probability.”⁵ Rather, as Anthony McGrew⁶ points out, it identifies the political possibilities inherent in the present and, as Graeme Cheeseman⁷ observes, “seeks to put in place the means to translate these into future actualities.” The concern here is primarily with the substance of the ethical debate rather than the institutional arrangements that follow from it. Nevertheless,

¹ Page 2006, 13.

² Wapner and Matthew 2009, 203.

³ Okereke 2008, 27.

⁴ Linklater 1998, 26.

⁵ Hayward 2009, 289.

⁶ McGrew 1997, 252.

⁷ Cheeseman 2001.

there are a number of important demands of cosmopolitan institutions. They must take “individual human persons as the ultimate units of concern;” they must attach that status “to every human being equally;” and they must regard persons as the ultimate unit of concern for *everybody*.⁸ While there is some evidence that a cosmopolitan sensibility has begun to inform the rhetoric of global environmental governance, there is little to suggest that the institutions and practices established are capable of achieving either cosmopolitan ends or means.

Environmental Displacement and Transnational Harm

The structure of inequity and injustice in the global politics of the environment is perhaps best captured in two related ideas – displacement and transnational harm. These ideas enable us to understand environmental degradation as an ethical problem as well as an ecological or scientific–technical one. Drawing on John Dryzek’s work, Paul Wapner⁹ has characterized displacement as “shifting the experience of environmental harm.” This “shifting” occurs across space – that is, the physical transportation or the unintended dispersal from one part of the world to another of the byproducts and environmental consequences of economic activity. It also occurs across time, by which future generations will come to suffer the environmental effects of today’s lifestyles. As Wapner and Matthew¹⁰ point out, it can also sometimes involve the displacement of people themselves. Displacement encompasses the outputs and inputs of economic activity. The outputs are perhaps the most obvious, involving the various forms of waste, pollution, and environmental damage that are the result of production and consumption and which are frequently experienced somewhere other than the location in which the source activity occurs. The input dimension of displacement refers to the exploitation of the renewable and non-renewable (or non-replenishable) resources and environmental services upon which production and consumption is based. There can be little argument with the proposition that present-day economic activity – which includes everyday subsistence and lifestyle activities as well as corporate practices – exploits resources unsustainably across space and across time.

Another way of understanding this problem of displacement is through the idea of ecological footprints and shadow ecologies. The footprint is a conservative measure of “how much productive land and water an individual, city, country or humanity requires to produce all resources it consumes and to absorb all the wastes it generates.”¹¹ Globally, humanity is outstripping biospheric capacity. There is, however, an equity dimension to this as well, in that some countries are running at an ecological deficit – that is, their ecological footprint is both greater than the biological capacity of the country itself *and* greater than the per capita global average, based on present economic activity and the level of economic activity that is required to ensure that natural capital is replenished. Sachs¹² argues that the OECD countries “surpass (in terms of ecology and equity) the admissible average size of [their ecological] footprint by a magnitude of about 75 to 85 percent.” Thus their economies cast an ecological shadow over

⁸ Kuper 2000, 654. The focus here is on harm, inequity, and justice between and among peoples. This is not to deny the crucial importance of an ethic that helps to define the relationship between people and the non-human world. I acknowledge that is a strong theme in the literature that deploys liberal and cosmopolitan values which reduces the human/non-human relationship to a second order or consequentialist form of cosmopolitan ideas. See, for example, Wapner 1997; and Brulle 2002.

⁹ Wapner 1997, 217.

¹⁰ Wapner and Matthew 2009, 209.

¹¹ Wackernagel et al. 2002, 12.

¹² Sachs 2002, 14.

poorer countries from which the centers of production and consumption derive their raw materials.¹³

The ethical challenge arises because these various forms of displacement and their consequences are implicated in transnational harm. Linklater¹⁴ defines transnational harm in a broad sense as “distress, suffering, apprehension, anxiety or fear” and the “damaging [of] vital interests.” The agency of harm – that is, those who cause it – is not confined to states but can include nonstate actors including those in the corporate and business sectors. Linklater makes it clear that not all harm is intentional and deliberate. Rather, and he suggests that this applies especially in the case of environmental displacement, it includes harm through unintended consequences and negligence or “the failure to take reasonable precautions to prevent the risk of harm to others.”¹⁵ The extent to which harm is unintended or the result of negligence rather than deliberate intent sometimes involves a fine interpretive line. The claims by Lawrence Summers, for example (at the time Chief Economist for the World Bank and later US Treasury Secretary) that “the economic logic behind dumping a load of toxic waste in the lowest wage country is impeccable [because] underpopulated countries in Africa are vastly under-polluted”¹⁶ suggest that economic models of rational efficiency were not so much blind to harm and those who would be most harmed as they were deliberately careless of those harms.

Harm and Inequity

Three specific forms of environmental inequity arise through these processes of displacement and harm. The first involves the disproportionate consumption of resources and production of waste. This, Hayward¹⁷ argues, is about depriving the “planet’s poorer people of their ‘fair share’ of the earth’s ecological space.” The rich consume more resources and produce more waste than the poor and this disproportionate consumption of resources has an historical as well as a contemporary dimension. The visible consequences of environmental degradation – such as deforestation, desertification, pollution, and loss of habitat – are concentrated more in developing countries. The invisible causes, however, are embedded in the ecological shadow cast by the industrialized economies. Affluence rather than poverty remains the primary and disproportionate cause of global environmental degradation. In the middle of the first decade of this century, the richest 20 percent of the world’s population (mainly in industrialized countries) still accounted for about 80 percent of total private and public consumption in monetary terms as well as consuming substantially above the global average in a range of key resource sectors.¹⁸ Energy-related per capita carbon dioxide emissions in the OECD countries averaged 11.6 tonnes in 2007; in the non-OECD countries the average was 2.9 tonnes and in the lowest-income countries of Africa the average was only 1.0 tonne per capita.¹⁹

The second measure of inequity, which is related to the first, involves the disproportionate impact of environmental change that reproduces the pattern of winners and losers associated with globalization. Vandana Shiva²⁰ puts it bluntly: “the natural resources of the poor are systematically taken over by the rich and the pollution of the rich is systematically dumped on

¹³ See MacNeill et al. 1991.

¹⁴ Linklater 2002, 327.

¹⁵ Linklater 2002, 330.

¹⁶ Cited in Puckett 1994, 53.

¹⁷ Hayward 2009, 283.

¹⁸ See World Resources Institute 2007.

¹⁹ US Energy Information Administration 2010.

²⁰ Shiva 2000, 136.

the poor.” Those who are most immediately affected by global environmental decline are those who have contributed least to the problem. These are the “subaltern groups”²¹ – the poor, women, indigenous peoples – who are now ecologically as well as economically and politically marginalized. The poor and disadvantaged are the least able to buy their way out of the consequences of pollution, environmental degradation, and resource scarcity. They are less able to control the causes or mitigate the impacts of environmental change without assistance. Material inequities reinforce practices, such as overuse of water resources or arable land, which contribute further to local environmental degradation and unsustainable development. Yet environmental and resource inequities are more than statements about geography. Countries that are already ecologically and economically vulnerable face such challenges in part because of the past extractive practices of colonialism. These are often compounded by a legacy of repressive and corrupt regimes and by problems of permissive regulatory structures and weak implementation.

The third form of inequity arises in the politics of inclusion and exclusion from the practices and structures of environmental governance. As David Held²² describes it, “the quality of the lives of others is shaped and determined in near or far-off lands without their participation, agreement or consent.” Those who are most affected by the displacement of environmental harm are more likely to have limited access to decision-making about environmental protection, sustainable development, and the use of resources within countries and internationally. The reasons lie in both deliberate policies of marginalization and the structural asymmetries of power and access to knowledge and influence. The environmental politics of gender and indigeneity demonstrate this double inequity.²³ For women and indigenous peoples, the disproportionate impact of the causes and consequences of environmental degradation on their daily lives and, in the case of indigenous peoples, their cultural as well as physical survival are symptomatic of the biases of a more extensive structural inequality. Unequal and inequitable allocation of resources, including access to commons or traditional lands, to decision-making authority over the resources and environmental services of daily life, compound the problem. Environmental harm and inequity are also implicated in and connected with a range of other harms such as material deprivation, increased suffering, humiliation and denial of agency, and procedural unfairness.²⁴ Environmental harm is not only about a politics of difference: it is also about a politics of injustice. In other words, it is both unfair and inequitable that some are harmed by activities not of their own making and over which they have little or no control and that those who contribute less to the problem end up suffering more, and those who contribute more, suffer less.

A Cosmopolitan Ethic

As described above, in a globalized world transnational harm deterritorializes both risk and vulnerability. It therefore demands a deterritorialized understanding of the content of rights to environmental justice on the one hand and the nature of obligations to minimize risk and respond to vulnerability on the other. As Mason²⁵ observes, this requires that the distinctions between the national and the international, and between the state and the private are “purposely

²¹ Stevis 2000, 63.

²² Held 1997, 244.

²³ For more, see Elliott 2004.

²⁴ See Beitz 2001.

²⁵ Mason 2008, 9.

dissolved.” In one sense, those who are most affected by transnational environmental harm in both its physical and ethical manifestations remain “the other.” Displacement and harm therefore invoke and demand a cosmopolitan morality of distance. This establishes a principle of responsibility for anonymous distant others, something distinct from Bauman’s morality of proximity that “occurs in the presence of a particular Other in a particular situation.”²⁶ Yet transnational environmental harm affects not just distant others, even if it affects them disproportionately.²⁷ Because the biophysical complexities of the planetary ecosystem define it as a global commons and a public good, humanity comes to constitute an ecological community of fate. “Damage done to the environment,” Amedeo Postiglione points out, “is damage done to humanity.”²⁸ A world risk society²⁹ therefore comes to be defined by “sameness” as well as by “otherness.”³⁰ Indeed, Beck³¹ goes so far as to suggest that with ecological threat, which “eliminates all the protective zones and social differentiations within and between nation-states,” comes “the ‘end of the Other’, the end of all our carefully cultivated opportunities for distancing ourselves.”

The cosmopolitan ethic rests on the proposition that humanity is ultimately bound together as a single moral community with shared rights and obligations. The consequence of such a world is that, as Immanuel Kant avowed, a right violated anywhere is felt everywhere. We therefore have a moral obligation to those who are not our co-nationals, a position Richard Falk³² describes as an “ethos of responsibility and solidarity.” Justice, as Onora O’Neill³³ argues, is “owed [equally] to all, regardless of location or origin, race or gender, class or citizenship.” This stands in contrast to a communitarian position which, while not necessarily rejecting the proposition that people within a state can or should have duties or obligations for justice to those beyond their borders, attaches moral *priority* to the community bounded by the state. But, as Linklater³⁴ argues, this “moral claim that insiders come first is ethically insecure in the context of increasing transnational harm.”

Two possible categories of obligation therefore apply to environmental issues. The first involves the obligation to avoid or to cease doing (transnational) harm. The “no-harm” principle is a standard convention of liberal natural law theory. In an international sense, it can be understood in both Grotian and Kantian terms. The Grotian tradition in International Relations requires *states* to avoid doing harm to one another.³⁵ The Kantian approach, on the other hand, relies on a “community of all human beings [which] entails a common participation in law and ... in a virtual polity, a cosmopolis that has an implied structure of claims and obligations.”³⁶

²⁶ Crone 2008, 64.

²⁷ The idea of distant others invokes not simply a geographic interpretation. Rather, the distant others may be geographically proximate but “socially” distanced. This has been the basis of the environmental justice movement within industrialized countries and, particularly, the United States.

²⁸ Postiglione 2001, 212.

²⁹ Beck 1999.

³⁰ Risk society defines the ecological crisis in part as a product of the institutional practices associated with the technological advances of industrial modernity. As Marshall (1999, 264) summarizes it, ‘the risk society becomes gripped by the hazards and potential threats unleashed by the exponentially growing productive forces in the modernisation process’. In turn, the risks associated with modern society impel the transformation of that society.

³¹ Beck 1999, 62.

³² Falk 1996, 499.

³³ O’Neill 2000, 45.

³⁴ Linklater 1999, 480–81.

³⁵ Linklater 1999, 478.

³⁶ Nussbaum 1997, 37.

Indeed, Beck³⁷ argues that it is within this “perceived necessity of world risk society” that Kant’s cosmopolitan society, as opposed to a Grotian society of states, can finally take shape.

A second category of obligation involves duties to address the actual (and potential) inequities that arise from transnational harm. That is, the transnational moral responsibility associated with the nature of global environmental change constitutes more than a negative duty not to harm others, to act “before harm has been received”³⁸ and not to hinder the efforts of others to provide a minimum for themselves. It also involves a positive requirement to assist those who are harmed to overcome the consequences of environmental degradation. The principles of justice and equity that apply in such cases are then bound up in a number of practical questions, addressed in turn below, about burden sharing and the allocation of costs and benefits, “justifiable entitlement,”³⁹ the nature of fault and complicity and how to account for historical practices in contemporary rights and obligations.⁴⁰

Moral Obligation

As argued above, a cosmopolitan ethic on transnational environmental harm first requires a clear acknowledgment of the moral obligations to which that harm gives rise. An environmental no-harm principle has both first- and second-order dimensions. The first-order approach emphasizes duty to others as individuals in the moral community. The liberal Enlightenment tradition has imbued cosmopolitan thinking with a legacy of concern with individual autonomy that is assumed to hold universally. It is from this value that other rights, duties, and institutions (including environmental ones) are assumed to derive. As Janna Thompson observes, “[t]raditional [liberal] cosmopolitanism is based upon the moral premise that all individuals deserve respect as autonomous agents.”⁴¹ Yet there are potential limits to a strictly liberal cosmopolitanism in the face of global environmental developments that “challenge certain fundamental, even constitutive, presuppositions of liberalism,”⁴² a theme to which the discussion in the later parts of this chapter returns. A focus on individual rationality and autonomy sits uncomfortably with the demands of group rationality in the face of problems that require collective action (a tension sometimes captured in the concept of the tragedy of the commons). Nevertheless, it is possible to draw on liberal cosmopolitan principles as a starting point for constructing environmental harm conventions, that is, norms about what it is permissible to do, or not do, in relations between people. Henry Shue⁴³ makes it clear, for example, that no individual has the freedom to cause injury or endangerment to others. And “others” are denied their own autonomy if they are unable to defend against injury and endangerment.

The second-order dimension of a moral obligation to individuals can be explored from a consequentialist perspective. While it is difficult to cast “the environment” or the “global ecosystem” as a moral subject, the obligation to avoid transnational environmental harm to others is likely to have more force if it is accompanied by an ethic of stewardship towards the environment. In other words, a commitment to protect the environment should also contribute to protecting near and distant others from the consequences of environmental change. This

³⁷ Beck 1999, 20.

³⁸ Mason 2008, 12.

³⁹ Pan 2003, 1.

⁴⁰ See Rowlands 1997.

⁴¹ Thompson 2001, 140.

⁴² Hayward 2009, 276.

⁴³ Shue 1981, 588.

stewardship model is one that looks backwards as well as forwards. Existing persons, Page⁴⁴ explains, are “duty-bound to protect environmental and human resources for the sake of their successors in return for benefits inherited from their ancestors.” In this light, Richard Falk⁴⁵ suggests that there is a “general community duty to respect the integrity of the global commons” and that such an ethic enjoys “provisional status” as an obligatory feature of international law. Shue shares this expectation that statements of obligation will be more than declaratory. His argument is that it is not only “wrong to inflict avoidable harm upon other people” but that such harm “ought often to be prohibited by law.”⁴⁶ In other words, transnational environmental harm should be not only defined as immoral but also made illegal.

Within the *normative* structures of global environmental governance, there is an apparently strong declaratory commitment to environmental stewardship, harm minimization and attention to justice in a way that seems to encompass more than a liberal focus on individual autonomy. Ideas about the ecological community of fate are echoed in the concept of the common heritage of humankind (CHM). The CHM principle has evolved from its original concern with sharing the benefits of resource exploitation (although there was always some dimension there of a compensatory burden) to one that expresses, in theory at least, the imperatives of shared environmental stewardship. This applies increasingly to both *res nullius* and *res communis* environments, the former technically owned by no one but open to such ownership and the latter, in non-legal vernacular, encapsulating ecosystems and ecosystem services that cannot be appropriated by any state but includes areas as well as services that are “owned” collectively or shared by everyone together. The image that this projects of a vulnerability to and responsibility for global environmental insecurities that is ultimately shared (even if it is shared unequally) is reproduced in the metaphors of the “common future” in the title of the 1987 report of the World Commission on Environment and Development, the “global partnership” which accompanied the 1992 Rio Summit, and the “global neighbourhood,” the title of the 1995 report of the Commission on Global Governance.

Concerns about equity and autonomy in an environmental community of fate are reflected in the definition of sustainable development elaborated by the World Commission on Environment and Development (WCED) in its report *Our Common Future*. Sustainable development is development that “meets the needs of the present without compromising the ability of future generations to meet their own needs”⁴⁷ thus giving some force to the concept of intergenerational equity. The Commission argued that the failure to meet this common interest was intimately connected with the “neglect of economic and social justice within and amongst nations.”⁴⁸ In elaborating its view of a sustainable future, the WCED acknowledged that sustainable development demanded attention to equity and justice, and to the building of a future that was “prosperous, just and secure.”⁴⁹ The Commission also made clear that we have a “moral obligation to other living beings and future generations.”⁵⁰ Yet Hayward⁵¹

⁴⁴ Page 2006, 119.

⁴⁵ Falk 2001, 231.

⁴⁶ Shue 1981, 587.

⁴⁷ WCED 1987, 43.

⁴⁸ WCED 1987, 47. However, this emphasis on justice as a key feature of environmental governance and sustainable development has been overshadowed by the report’s commitment to continued economic growth, the maintenance of a liberalized world economy, and the articulation of a key role for corporate actors.

⁴⁹ WCED 1987, 63.

⁵⁰ WCED 1987, 37.

⁵¹ Hayward 2009, 282.

suggests that achieving, for every person, the rights that derive from the exercise of such obligations would “involve a more radical transformation of global relations than seems to be supposed in most discussions of sustainable development.”

The obligation to minimize harm has been expressed primarily through a Grotian assumption that global relations rely on a society of states and that it is therefore states that have a responsibility not to harm each other. Principle 21 of the Stockholm Declaration, adopted in 1972, drew on earlier international legal decisions to affirm that states had a responsibility to limit environmental damage (harm) beyond their borders. This is reinforced in principle 2 of the 1992 Rio Declaration and in most multilateral environmental agreements. In theory, this principle of transboundary responsibility establishes an obligation with respect to displacement, requiring states to take action to ensure that the outputs of economic activity do not cause damage to the environment and by implication, the lives of peoples and places elsewhere. An obligation not to cause or to limit damage to the environment is also relevant to input problems. In other words, the exploitation of resources and environmental services for economic purposes should not result in a drawing-down of the ecological capital of other states or areas beyond national jurisdiction (that is, resources should not be overexploited). Nor should there be irreversible or even severe environmental consequences of such exploitation. It is open to question whether there is much more than fragmentary evidence that such principles have become customary international law. That would require evidence of general state practice and that is not yet the case. States have generally paid more attention to their rights and less to their obligations. Multilateral environmental agreements continue to affirm the physical rights of states to their resources and the authority rights of states over how those resources can be used and exploited.

Obligations regarding transnational environmental harm are likely to be stronger if they recognize corresponding individual or collective rights that can be claimed against moral agents. There is a substantial body of international law which provides some basis for claims regarding a human right to a clean environment or the importance of a clean environment to achieving other human rights are to be met.⁵² Some of these move in the direction of a substantive right whereas others focus on procedural rights (particularly related to information and decision-making such as that found in the 1998 Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters). In 2005, the United Nations Commission on Human Rights (UNCHR) resolved that “a democratic and equitable international order requires, inter alia ... the realisation of the right of every person and all peoples to a healthy environment.”⁵³ However, there is as yet no codified treaty-based right to a clean environment (or to an environment of a certain quality) or even to sustainable development. For that reason, rights to a clean environment tend to be aspirational and at times rather vague although they can provide what Michelle Schwartz⁵⁴ calls a “surrogate protection” against environmental harm. This surrogate approach is prominent in the suggestion that “most of the acts causing environmental degradation would also violate and interfere with universal human rights, such as the right to life and security of person, the right to health and the right to livelihood.”⁵⁵ This theme was also evident in a UNCHR resolution on “human rights and the

⁵² For a detailed listing of international legal instruments in this context, see Wagner et al. 2003. For a discussion of the key issues, see Elliott 2004.

⁵³ UNCHR 2005a, 6.

⁵⁴ Cited in Bosselmann 2001, 122.

⁵⁵ International Peoples' Tribunal 1997, 121.

environment as part of sustainable development,” companion to the democratic international order resolution described above, that focused primarily on the negative impacts that unsustainable development and environmental degradation could have on the enjoyment of human rights.⁵⁶

Burden Sharing

Rights claims generate questions about the nature of equitable environmental entitlements, particularly whether autonomy and fairness require an equal share of material benefits, a minimum to ensure that basic needs can be met and harm limited, or some form of redistribution of entitlements to compensate for past inequities. What, in this case, would constitute a “rightful share” to environmental goods or resources and how would a proportionate (as opposed to a disproportionate) impact be defined? Lomasky⁵⁷ argues that inequality itself does not show that “the wealthy have any duty to acquiesce in a transfer of some share of their resources to the poor” (as opposed to what might be kind of them to do as a matter of “laudable charity”). Stone⁵⁸ goes further, claiming that “poverty does not excuse theft” or guarantee a right to pollute. Shue,⁵⁹ on the other hand, argues that for equity to be meaningful in the global politics of the environment it must involve compensatory burdens on the part of the rich developed countries whose past actions have created environmental inequity, especially because the “damaging behaviour has continued unabated long since it became impossible to plead ignorance.” He also demands that the pursuit of equity must take account of differences in the ability to pay for mitigation of environmentally damaging behavior and adaptation to environmental change.

Linklater⁶⁰ proposes that “we have obligations to help the poor overcome the effects of inequalities, even if we have had no part in creating them.” In effect, this is about burden sharing as a progressive rate of payment that requires that those who are already the worst off are not made worse off still, thus effecting a guaranteed minimum in ecological as well as material terms. This is more than a liberal cosmopolitan respect for liberty and autonomy. Rather, it involves social rights to resources and benefits⁶¹ and suggests that the social dimensions of human rights and justice, expressed in solidarity (or fraternity) principles are equally as important as the individual ones of liberty and equality.⁶²

In practice, this kind of solidarist environmental justice would involve, at minimum, enhancing the transfer of resources to developing countries. It would also involve international legislative programs that would effectively restrict or minimize the ecological footprint of those who have a disproportionate impact on the environment. Sustainable development contains the kernel of the idea that if needs are to be respected and met, burdens should be shared. The declaratory ethic of burden sharing is most notable, however, in the principle of common but differentiated responsibilities (CBDR). The concept is meant to convey both solidarity and a particular kind of burden sharing that takes account of inequities in global resource use and in contribution to environmental harm. Most multilateral environmental agreements contain what

⁵⁶ UNCHR 2005b.

⁵⁷ Lomasky 2007, 211.

⁵⁸ Stone 2004, 281.

⁵⁹ Shue 1999, 536.

⁶⁰ Linklater 1999, 476.

⁶¹ Thompson 2001, 141.

⁶² See Bosselmann 2001.

Christopher Stone⁶³ describes as some “veiled or encoded variant” of CBDR which requires that the special needs of developing countries be given priority and refers to the importance of special provision to meet developing country needs or requires developed countries to mobilize new and additional financial resources, or acknowledges that developed countries must take the lead in resolving particular environmental problems (such as climate change, for example).

In practice, burden sharing has been one-sided and driven as much by risk prevention for the North as it has by an “other-regarding” cosmopolitan concern for those who are most harmed.⁶⁴ Rich countries have been reluctant to adopt policies that would minimize transnational environmental harm. Nor have they been willing to commit the kinds of material resources required to help the most disadvantaged to recover from the consequences of environmental damage or to minimize their impact on the environment in the absence of “autonomous choice.” Global funding for sustainable development remains unacceptably low and the liberal expectation that financial assistance should be directed through foreign direct investment rather than official development aid has meant that the poorest countries with limited infrastructure and little attraction for investors are increasingly disadvantaged. Even mechanisms designed specifically to assist countries who are most in need of support – such as the Clean Development Mechanism adopted under the Kyoto Protocol on climate change – are skewed in favor of middle-income developing countries. Because burden sharing has focused primarily on managing the *political* relationship between rich and poor countries, much less attention has been paid to the issue of compensatory justice for poor peoples. This runs the risk of reducing burden sharing to a form of proxy cosmopolitanism – confining justice to the interstate level on the assumption that individuals’ “basic claims to justice have already been [or will be] taken into account” in just (domestic) societies.⁶⁵

Consent and the Cosmopolitan Public Sphere

Two key liberal demands derive from the binding together of peoples as an ecological “community of fate.” First, “people should be free and equal in the determination of their own lives, so long as they do not deploy this framework to negate the rights of others.”⁶⁶ Second, such a community “rightly governs itself and determines its future.”⁶⁷ What this notion of “right governing” means, in environmental terms, is that decisions about the protection of the environment and allocation of resources must be subject to democratic control of both local and global practice. This reflects the principle *quod omnes tangit ab omnibus comprobetur* – what touches all should be agreed to by all.⁶⁸ As a political project, cosmopolitanism has therefore been tied to demands for a “rights based system of global governance”⁶⁹ that values accountability and transparency as well as participation. Democracy in the cosmopolitan sphere, Martin Köhler⁷⁰ argues, “provides the conditions for non-discriminatory discourse within and among societies.” In this context, cosmopolitan governance requires democracy within states, the extension of democratic practice to relations among states and the enhancement of democracy within global institutions and political practices. In this view, the so-called

⁶³ Cited in Okereke 2008, 32.

⁶⁴ See Shiva 1993.

⁶⁵ See Kuper 2000, 641.

⁶⁶ David Held cited in Achterberg 2001, 192.

⁶⁷ Held 1997, 239.

⁶⁸ See Low and Gleeson 1999, 189.

⁶⁹ Kaldor 2000, 7.

⁷⁰ Köhler 1997, 390.

“delegate” model, which recognizes states as the vehicle through which the rules and practices of global environmental governance account to *national* publics, is insufficient because the chains of accountability are often “remote and indirect.”⁷¹

A cosmopolitan democratic imperative demands and defends a transnational or global public. This constitutes a new form of global political community based on the principles of dialogue and consent rather than power and force, and on the construction of universal frameworks of communication.⁷² As Tully⁷³ points out, if “environmental justice is to be democratic, then the principles, values and goods that are brought to bear ... must be open to democratic discussion and debate.” This is a “thicker form of public dialogue which goes beyond the thin ‘proceduralism’ of liberal democracy.”⁷⁴ It seeks to ensure that those who are most vulnerable, powerless, and marginalized are empowered to refuse, renegotiate, and contest.⁷⁵ Dialogic or communicative processes do not require actual participation. They do, however, demand that “all who are possibly affected *could* assent as participants in rational discourses.”⁷⁶

Multilateral environmental agreements and associated declarations have made much of the importance of environmental information and education and access to decision-making.⁷⁷ The cosmopolitan emphasis on information and consent as necessary conditions to minimize transnational harm has perhaps been best captured in the concept of Prior Informed Consent (PIC). This is expressed in a number of environmental treaties, most notably the 1989 Basel Convention on the transboundary movement of hazardous waste and the 1998 Rotterdam Convention on prior informed consent (agreed in the context of managing hazardous chemicals and pesticides). This issue of “whose consent” is central to how the PIC principle is given effect in international law. In particular, it is important that wherever else it functions, consent must operate “at the level of the local community”⁷⁸ for two reasons. The first has to do with the input component of transnational harm – in many cases it is the resources and knowledge of local communities that are being accessed, exploited, or expropriated. The second reason arises from the output dimension of transnational harm. Local communities and peoples should have the right to determine, based on accurate knowledge of the environmental and other consequences, whether or not to accept waste of whatever kind which arises from economic activity elsewhere. PIC assumes that the appropriate authority in the importing state will act in the interests of local communities. Yet as Jim Puckett⁷⁹ has argued, PIC can “undermine local democracy and institute a system of decision-making that is wide open to abuse.”

There has been growing unrest among grassroots organizations, civil society groups, and nongovernmental organizations (NGOs) that the much-lauded democratization of global environmental governance has done little to democratize or make equitable the outcomes. Participatory rights run the risk of becoming most meaningful for those NGOs which are “well-organised, well-financed and well-informed.”⁸⁰ It is therefore important to distinguish between

⁷¹ See Mason 2008, 11.

⁷² See Linklater 1998.

⁷³ Tully 2001, 148.

⁷⁴ Barns 1996, 2.

⁷⁵ Onora O'Neill cited in Linklater 1998, 28.

⁷⁶ Jürgen Habermas in Brulle 2002, 4; emphasis added.

⁷⁷ On the other hand, the explosion of information Paul Virillo suggests, can have disenfranchising effects. Cited in Lacy 2002, 48.

⁷⁸ Anuradha 2001, 33.

⁷⁹ Puckett 1994, 54.

⁸⁰ Anon. 1991, 1589.

civil society as a cosmopolitan public sphere and civil society as professionalized nonstate activism. This draws attention, then, to a second important theme in the cosmopolitan politics of consent – that of a cosmopolitan public sphere. In response to transnational harm and political marginalization, local voices are demanding to be heard and are constituting alternative, albeit not always clearly articulated, forms of resistance to globalism. In such a “global” cosmopolis, the state is de-centered (but not dismissed) as political actor and as moral agent and subject or, as Daniele Archibugi⁸¹ puts it, “deprived of [its] oligarchic power.” This equates with a “globalization from below” in which local voices do more than legitimize global democracy. They constitute an autonomous source of political and communicative power that serves also to sever the link between democracy and the state.⁸²

In liberal terms, the creation of a political space in the global politics of the environment for actors other than states has been justified on the grounds of democratic pluralism, efficiency, and effectiveness rather than autonomy and justice. Decision-making by governments and the implementation of legislative and regulatory frameworks is argued to be more effective if all stakeholders are represented and if the legitimate interests of actors other than states are recognized. Greater inclusiveness can only be welcomed as a precondition for sustainable development and more effective environmental outcomes. But the whole issue of rights and freedom from oppression (in effect, justice and autonomy) is downplayed. This is not a process by which those who are affected are able to negotiate and contest. The emphasis on democratic efficiency and pluralist governance takes little account of the relations of power and powerlessness that mute local or marginal voices. Those at the margins, or those most harmed – such as the poor, women and indigenous peoples – have become defined as objects to be acted upon, to be educated, consulted, and informed, to be empowered from above or from outside, or as a source of knowledge to be appropriated and incorporated into the discourse of the global as and when needed. The themes of emancipation and equity, and new visions of development which so often animate the outcomes of collective global activism on environment and development are, for the most part, absent in official discourse.

Some Concluding Thoughts

An ecologically sensitive cosmopolitanism demands transnational environmental justice between peoples within a world society as well as, and possibly in preference to, international justice between states in an international society. What this does not tell us (and perhaps cannot tell us) is whether these are perfect duties, which must always be observed. If the cosmopolitan duty is an imperfect one that admits exceptions, then it signifies only a “general good” that leaves the choice of specific action to the moral agent. Faced with such an imperfect duty, it is not wrong *not* to discharge that duty on any *particular* occasion, as long as one has adopted, in Kantian terms, the right maxim.⁸³ There is, nevertheless, a meritorious duty to act when one can. However, if obligations to others in the moral community constitute a perfect duty – something more than an “optional act of charity”⁸⁴ – moral agents no longer have an option to decide how far to honor their obligations. The cosmopolitan commitment to minimize harm may well be seen as something approaching a perfect duty. That is, we should minimize harm as a general good, even if we do not specifically know who might (or might not) be harmed or

⁸¹ Archibugi 2001, 204.

⁸² On the latter, see Dryzek 1999, 277.

⁸³ See Kleingeld 2000, 335. Lacy (2002, 49) refers to this as a form of “green categorical imperative.”

⁸⁴ Onora O’Neill in Jones 1999, 92.

saved from harm by our actions. Compensatory burden sharing, on the other hand, is more contentious as a perfect duty. The obligation to come to the aid of those who have been harmed through environmental degradation not of their own making, in circumstances in which one can provide such assistance (the ability to pay), would nevertheless seem to constitute a meritorious duty to others.

The nature of environmental displacement, transnational harm, and environmental inequity forces us not only to confront the obligations that we have to each other but also to establish ways to meet those obligations. Precautionary norms, Mason⁸⁵ tells us, “create expectations for enlarging obligations of responsibility towards global publics and future generations.” The question of agency is therefore critical. As moral actors, states are expected to act as “local agents of the world common good.”⁸⁶ For many, the state – or at least the liberal state – can and should be strengthened because it has the resources to enforce implementation of environmental agreements including those which seek to minimize environmental harm and enable compensatory justice. The state thus becomes a vehicle, even if not the only one, by which the democratization of governance and the politics of consent at a global level can be achieved. Falk⁸⁷ expects that a “re-empowered state would act alongside other political actors.”

Yet forms of liberal democratic pluralism reliant on the state have proved insufficient to overcome political structures of inclusion and exclusion and the state remains ambiguous as cosmopolitan moral agent. In practice, the mechanisms of environmental governance do not “institutionalize global responsibility” despite some claims to the contrary.⁸⁸ The normative interests of the state remain evident in the dominance of sovereignty claims and national interests that are pursued at the expense of cosmopolitan values and at the expense of the environment. Doubts remain about whether the value of liberal freedom can “promote the kind of collective restraint that global environmental justice would seem to require.”⁸⁹ The very groups and voices whose participation is essential to sustainable development and responses to the challenges of global environmental change remain distanced from the domestic and global practices of environmental governance.

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⁸⁵ Mason 2008, 18.

⁸⁶ Hedley Bull cited in Linklater 1999, 478.

⁸⁷ Falk 2001, 223.

⁸⁸ See, for example, Wapner 1998, 283.

⁸⁹ Hayward 2009, 290.

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39 Democracy and global environmental politics

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This chapter explores how questions on democracy and democratic legitimacy have entered the study and practice of global environmental politics. Democratic values, such as legitimacy, participation, accountability, and transparency have emerged as central research themes in global environmental politics.¹ Mechanisms to increase transparency and accountability, such as multistakeholder dialogues and civil society deliberation, are becoming mainstream practices in environmental multilateralism. However, the research on the democratic legitimacy of global environmental politics is largely isolated from the international relations (IR) scholarship on global democracy beyond the nation state.² Transnational democracy,³ cosmopolitan democracy,⁴ discursive democracy,⁵ and stakeholder democracy⁶ have been advanced as institutional innovations to counter the democratic deficit of international organizations and global governance. The aim of this chapter is to bridge research in global environmental politics on the legitimacy in environmental governance with the IR scholarship on transnational democracy. The question of the democratic credentials of global environmental politics taps into debates on the democratic deficits of global governance arrangements and how to make these more accountable, transparent, and inclusive. In the scholarship of global environmental politics the democratization of global environmental governance is implicitly conceptualized as increased civil society participation, nongovernmental organization (NGO) representation, and multistakeholdership in international negotiations. This chapter endeavors to link work on the legitimacy in global environmental politics with contemporary debates on democracy beyond the nation state, which problematizes the link between democracy and civil society participation.

The next section summarizes the “participatory turn” of global environmental politics and multilateral treaty making, where mechanisms to increase representation and participation of civil society and stakeholders are proliferating. The subsequent section examines core research themes on democratic legitimacy appearing in the study of global environmental politics. The following section examines how normative models of global democracy are mirrored in the research on global environmental politics, for example in proposals for a World Environmental Organization. Debates on the democratic legitimacy in global environmental politics are juxtaposed in various accounts of transnational democracy, such as democratic intergovernmentalism and discursive democracy. The next three sections examine the implications of the reformist strategies of liberal institutionalism, the transformative strategies of deliberative democracy, and the critical perspectives of political economy for debates on the legitimacy of global environmental politics. The final section concludes.

¹ Bernstein 2005; Mason 2008; and Gupta 2010.

² Archibugi and Koenig-Archibugi 2011.

³ Anderson 2002.

⁴ Held 1995.

⁵ Dryzek 2000.

⁶ MacDonald 2008.

Democratic Innovations in Environmental Multilateralism

The past two decades of Earth summits on sustainable development in Rio de Janeiro in 1992, in Johannesburg in 2002 and the forthcoming Rio+20 summit in 2012 have consolidated a model of “participatory” or “bottom-up” multilateralism, where civil society participation, multistakeholder dialogues, and institutionalized representation of major groups are emerging as democratic innovations imported from the national context.⁷ Furthermore, the UN Global Compact and the World Commission of Dams epitomize governance arrangements with institutionalized dialogue and decision-making procedures between societal actors from market, government, and civil society sectors.⁸ Multistakeholder dialogues, citizen juries, and public–private partnerships exemplify the deliberative and participatory innovations that have gained ground in multilateral negotiations on climate change, sustainable development, food safety, and biodiversity. A recurrent argument is that inclusive and participatory decision-making will enhance democratic legitimacy and public acceptance for decisions. Various policy innovations that increase the participation of and deliberation among citizens and societal stakeholders have the past two decades been promoted in multilateral environmental treaty making. The United Nations Conference on Environment and Development in Rio de Janeiro in 1992 marked the start of the multistakeholder model for subsequent environmental mega-summits.

Deliberative and participatory modes of governance were further institutionalized by the World Summit on Sustainable Development (WSSD) in Johannesburg 2002.⁹ Agenda 21, which was adopted in Rio, states that “[o]ne of the fundamental prerequisites for the achievement of sustainable development is broad public participation in decision-making.”¹⁰ The process toward the third Earth summit – in June 2012 – brings together UN major groups to debate the institutional framework for global sustainability governance. The WSSD outcomes exemplify this trend with close to 400 partnerships for sustainable development and detailed procedures for including civil society, business, and governments in stakeholder forums and dialogues.¹¹ Deliberation among the UN’s major groups is claimed to generate more legitimate and effective global environmental policies as affected stakeholders are included and granted ownership of environmental problems. In multilateral agreements, values of transparency and participation have also been codified in the Aarhus Convention on access to information and public participation.¹²

Researching the Democratic Legitimacy of Global Environmental Politics

Expanding research on the democratic legitimacy of global environmental politics largely mirrors the multilateral practice by focusing on the rise in civil society activity and new mechanisms for stakeholder deliberation and participation in multilateral institutions and international regimes. Three research themes can be identified in the global environmental politics scholarship: the role of NGOs and civil society in enhancing democratic legitimacy of international environmental negotiations; the role of transparency and accountability mechanisms in transnational governance agreements; and the trade-off between democratic legitimacy and environmental effectiveness in global environmental governance. First, a significant research effort has been directed toward

⁷ Green and Chambers 2006.

⁸ Dingwerth 2005.

⁹ Küpçü 2005; and Bäckstrand 2006a.

¹⁰ United Nations 1992, chapter 23.2.

¹¹ Martens 2007.

¹² UN-ECE 1998.

civil society and NGO participation and representation in multilateral institutions and environmental diplomacy, which is reflected in scholarly work on NGO influence and diplomacy.¹³ Global environmental politics have been a site for an “associational revolution” of transnational civil society, NGOs, and social movements.¹⁴ NGO participation has been seen as a way to reduce the “legitimacy deficit” of state-centric multilateral institutions, which is underpinned by an assumption that global civil society represents public interest, citizens, and marginalized actors and constituencies.

The democratic deficits of multilateral environmental negotiations have paved the way for a research on the disenfranchisement of civil society in global sustainable development governance.¹⁵ The work primarily focuses on state-centric practices, such as on international environmental negotiations and UN agencies. However, whether NGOs can enhance democratic legitimacy is contested. Scholars of global environmental politics and IR have questioned whether NGOs and civil society is a force for democratization, arguing that the democratic credentials of transnational civil society is ambiguous.¹⁶ Notably, the business community as a transnational nonstate actor is not conceived as a force for public good and democratic norms. In contrast, scholars of global environmental politics recurrently argue that corporate actors reinforce the privatization, deregulation, and marketization of global environmental governance.¹⁷

A second research theme revolves around accountability and transparency mechanisms to enhance the democratic quality of decision-making processes of multilateral institutions and UN institutions. Accountability can be conceived as a set of rules and procedures, identifying who takes part in the decision-making, who holds whom responsible for what action and the consequences if standards are breached.¹⁸ A precondition for holding actors responsible and accountable is transparency, access to information and availability of monitoring mechanisms.¹⁹ The transparency and accountability of transnational hybrid governance arrangements entailing a mix of public and private actors have increasingly been brought to the fore.²⁰ Illustrative examples include the transparency and information closure of state-led multilateral agreements and private agreements²¹ as well the accountability of transnational governance of climate, forestry, and water.²² Scholars have critically analyzed the accountability of the corporate sector in climate change through civil society activism and oversight.²³ The democratic credentials of public–private partnerships adopted the 2002 WSSD has been subject to extensive research combining both qualitative and quantitative methodologies.²⁴ Moreover, recent research has revolved around critically assessing the legitimacy of nonstate governance, such as certification of forests and marine resources by the Forest Stewardship Council and the Marine Stewardship Council.²⁵

¹³ Betsill and Corell 2001, 2007.

¹⁴ Wapner 1996; and Ford 2010.

¹⁵ Fisher and Green 2004.

¹⁶ Wapner 1996; Scholte 2002; and Dombrowski 2010.

¹⁷ Elliott 2002; Matthews and Paterson 2005; and Ford 2010.

¹⁸ Chan and Pattberg 2008, 104.

¹⁹ Bäckstrand 2008, 80.

²⁰ Dingwerth 2007; Bäckstrand et al. 2010; and Bernstein 2011.

²¹ Auld and Gulbrandsen 2010; and Gupta 2010.

²² Bäckstrand 2008; and Chan and Pattberg 2008.

²³ Newell 2008.

²⁴ Meadowcroft 2007; Mert 2009; and Bäckstrand et al. 2010.

²⁵ Bernstein and Cashore 2007.

A third research theme centers on the claim that the relationship between democracy and global environmental governance cannot be isolated from questions of environmental performance, effectiveness, or output legitimacy of international environmental agreement.²⁶ If environmental governance arrangements do not live up to the standards of democratic and procedural legitimacy, output legitimacy, effectiveness or problem-solving capacity is an alternative source of legitimacy. Accordingly, legitimacy rests on combining effective environmental problem solving with accountable, inclusive, and transparent procedures. The legitimacy of global environmental governance is approached by separating input and output legitimacy, which is derived from the literature on EU governance.²⁷ Input legitimacy stems from procedural logic where the participatory quality of the decision-making process in terms of deliberative quality, participation, and accountability is in focus. Output legitimacy is associated with a consequential logic and effectiveness, and relates to whether governance arrangements contribute to collective problem solving. If environmental governance mechanisms had strong democratic procedural legitimacy (robust accountability and transparency mechanisms, wide inclusion of stakeholders, venues for deliberation), while failing to solve pressing environmental problems (greenhouse gas emissions, deforestation rates, water shortage, and loss of biological diversity), the legitimacy of these governance arrangements would be called into question. Scholars have studied the synergies and trade-offs between democratic legitimacy and environmental effectiveness of public–private partnerships for sustainable development²⁸ and forest governance certification schemes.²⁹ The consideration of effectiveness as a source of legitimacy reflects decades of debates in green political theory on how to balance process (procedural legitimacy) versus substantive sustainable outcomes (effectiveness) in tackling global environmental threats.³⁰

Democratizing Global Environmental Governance: Promises and Pitfalls

How does contemporary global environmental governance resonate with normative ideals of global democracy? What is the potential for democratizing global environmental politics given the increased fragmentation of global governance and the transformation of multilateralism, which relies increasingly on collaboration between private and public actors reflected by notions of “complex multilateralism,” “public–private multilateralism,” and “market multilateralism”? The remainder of the chapter outlines three alternative accounts to the prospects of democratizing global governance: liberal-institutionalism, deliberative democracy, and critical perspectives. These can be framed as reformist, transformative, and critical strategies for democratization, but they all move beyond the study of international regimes and state-centric practice. The aim is to link ongoing debates on the legitimacy of global environmental governance with scholarship in IR and democratic theory on the prospects for democratizing the global order.³¹ A core argument is that the multifaceted and polycentric nature of global governance requires rethinking of legitimacy standards. Contemporary environmental politics features a range of new mechanisms, fora, and actors, which are characterized by the rise of public, private, and hybrid networks engaged in governance function such as rulemaking,

²⁶ Victor et al. 1998; and Young 1999.

²⁷ Scharpf 1999.

²⁸ Bäckstrand 2006b; Biermann et al. 2007; and Szulecki et al. 2010.

²⁹ Gulbrandsen 2005.

³⁰ Smith 2003; and Baber and Bartlett 2005.

³¹ Scholte 2002, 284.

information sharing, implementation and capacity building. Beyond international regimes, environmental policies emerge at municipal and subnational levels entailing corporate actors, civil society actors, public–private partnerships, trading schemes, and markets.

An important question is whether global democracy is the solution to the pressing environmental problems such as climate change and a remedy to the governance, legitimacy, and implementation deficits.³² The answer, of course, depends ultimately on which model of democracy you apply. While cosmopolitan scholars argue that global democracy is necessary to adequately respond to the global environmental threats, skeptics question whether it is possible, or even desirable to democratize global governance.³³ Communitarians argue that transnational democracy is not possible because of the lack of coherent global constituency or *demos* in the politically, socially, culturally divided community of 193 states. Realists claim that the dynamics of *realpolitik*, international anarchy, and sovereign power are structural features preventing the emergence of global democracy. The three accounts for a more democratic order advanced in this chapter move beyond the cosmopolitan visions of world government and the realist dismissal of global democracy by rethinking democratization as compatible with the non-electoral, horizontal, and non-hierarchical features of world politics and moving beyond state-centric models of democracy.³⁴

The scholarship in global environmental governance debating a World Environmental Organization (WEO) can be linked to theories of cosmopolitan democracy. Proponents of cosmopolitan democracy argue that structures and processes of global governance must be transformed to recognize individuals rather than sovereign states as the legitimate actors and moral agents. A world order based on a global constitution and rule of the law at a regional and global level is favored. Democratizing global governance entails a global and divided authority system based on confederalism, the enactment of a cosmopolitan law, and extension of the mandate of international courts.³⁵ This encompasses cross-national referenda, global assembly, or a world parliament based on a reformed UN General Assembly. The move from a territorial principle to a principle of “affectedness” is realized by establishing new, permanent organizations and mechanisms at the regional and global levels. These cosmopolitan accounts are reflected in the arguments of advocates for a WEO, which would imply a centralization of global environmental politics.³⁶ This agency should, according to its proponents, have the power, authority and funds to coordinate environmental policies throughout the UN system. The envisioned WEO should limit the sovereignty of states in environmental politics and thereby match and counterbalance the power of the World Trade Organization (WTO) in the trade arena. However, opponents criticize the WEO and other cosmopolitan proposals for their naive utopian ambitions, neglect of issues such as the role of coercive force in IR, the political economy of global capitalism, and for underplaying the role of more sporadically deployed and hybrid mechanisms of governance.³⁷

³² Haas 2004.

³³ Dahl 1999; and Cerny 2009.

³⁴ Bäckstrand 2006a, 494.

³⁵ Held 1995, 22.

³⁶ Biermann and Bauer 2005.

³⁷ Najam 2003.

Liberal Institutionalism: Democratizing Global Environmental Politics through Reform

Liberal institutionalism or democratic intergovernmentalism starts from the premise that sovereignty remains an entrenched principle of the international system.³⁸ States are recognized as the only actors with rights, obligations, and the capacity to enact and be bound by international treaties. Democratic legitimacy in the global arena stems from collective decision-making processes where sovereign states are the primary actors. Liberal institutionalism addresses the democratic deficit by a set of reformist strategies of multilateral institutions and intergovernmental decision processes to make them more responsive, accountable, and transparent in line with the idea of “good governance.”³⁹ This encapsulates a largely procedural view of democracy by promoting key democratic values, such as accountability participation and transparency that are central to the legitimacy of global governance. The Commission on Global Governance epitomizes liberal institutionalism in its call for refashioning institutions of international governance in a more transparent and representative manner.⁴⁰ The accountability of international institutions is framed as an issue of access and openness to stakeholders outside the community of legitimate decision-makers (states). Increased nonstate actor participation and civil society consultation in the WTO and the World Bank, as well as at global multilateral summits, typifies this emphasis. Civil society participation is encouraged since it adds accountability, openness, and expertise. Liberal institutionalism emphasizes the critical importance of civil society in complementing a state-centric world.

As discussed in the previous sections, the liberal-institutional reform vision on how to promote global democratic legitimacy (through mechanisms for multistakeholding, participation, transparency, and accountability) is a predominant approach among global environmental governance scholars. In the comparative research on NGO diplomacy in biosafety, whaling, and forestry, the influence of NGOs in international negotiations is conceived as an international experiment in global democracy.⁴¹

Liberal-institutionalism is linked to ideas of global stakeholder democracy, where questions of power, voice, representation and accountability of nonstate actors are central.⁴² It can be conceived as a subset of pluralism in which democratic legitimacy is enhanced through the participation and representation of nonstate actors in transnational governance arrangements.⁴³ The institutionalized representation of affected stakeholders in decision-making is an important complement to intergovernmental decision-making. Multistakeholder multilateralism entails the employment of hybrid mechanisms, such as stakeholder consultations and public-private partnerships associated with the 2002 WSSD.⁴⁴ The idea is to promote interactive decision-making between affected societal interests and government representatives. Since there are no procedures for overcoming disagreement in deliberative processes, in most global governance arrangements institutionalized representation of stakeholders would not provide a “stand-alone framework for global public decision-making and negotiation.”⁴⁵ It recognizes the limitations of liberal institutionalism to facilitate deliberative processes between stakeholder communities

³⁸ McGrew 2002.

³⁹ Grant and Keohane 2005; Buchanan and Keohane 2006; and Keohane 2011.

⁴⁰ Commission on Global Governance 1995.

⁴¹ Betsill and Corell 2007.

⁴² Bäckstrand 2006a; and MacDonald 2008.

⁴³ Dingwerth 2007, 22.

⁴⁴ Martens 2007.

⁴⁵ MacDonald 2008, 161.

and decision-makers. Institutional representation of multistakeholder interests means “a voice but not a vote.”

The experiments with global stakeholder democracy in multilateral processes on sustainable development, entails institutionalized representation of UN “major groups,” such as NGOs, business, trade unions, farmers, youth, women, science and technology communities, cities and municipalities, and indigenous communities. However, compared with the Earth summits, the UN climate summits have less elaborate mechanisms for stakeholder representation than other international environmental negotiations. The climate negotiations have no formalized procedure to represent affected stakeholders or promote interaction and deliberation between government, business, and civil society.

Liberal institutionalism argues that democratic state-centered legitimacy is not appropriate for evaluating non-electoral, non-territorial transnational governance arrangements. The meaning of democratic legitimacy in the context of complex transnational environmental governance, which is defined by overlapping public and private authorities, is changing. Democracy, legitimacy, and accountability have to be reframed along non-statist lines in order to comprehend multiple sites of public–private governance.⁴⁶ A core argument is that no multilateral institution or governance arrangements would meet the high threshold of liberal democracy derived from domestic politics. It would be inappropriate to impose the high threshold to democratic ideals developed in the context of the nation state to global governance. Consequently, in assessing the legitimacy of transnational governance, “the threshold of acceptability that is appropriate to use should be lower than in a well-ordered society.”⁴⁷ As discussed in the previous section, global environmental politics scholars have critically examined how to rethink accountability and transparency in multilayered public–private environmental governance arrangements.⁴⁸ Researchers in global environmental politics are explicitly addressing which legitimacy or democracy standards are viable to new public–private and private environmental governance.⁴⁹ Accountability is attainable while democratic legitimacy will be confined to the domestic level, and will be cast in terms of electoral accountability. However, non-electoral accountability, through shared global publics (NGO contestation), professional norms and transnational networks (epistemic communities), and markets (rating agencies and corporate standards) can be enhanced.⁵⁰

The above perspective represents normative legitimacy derived from norms, values and principles of liberal democracy, and a “right to rule.” An institution, governance system or political order is legitimate if it is based on values, such as transparency, rule of law, accountability, fairness, inclusion, participation, representation, and deliberation. This can be contrasted with empirical, social, or political legitimacy,⁵¹ which is defined as the acceptance of a particular social order, rule, norm, or institution by a set of actors or by a specific community.⁵² Compliance with rules and norms occur if actors perceive the social and political order as acceptable and an institution or a rule is legitimate if it is widely believed to be legitimate.

⁴⁶ Scholte 2011.

⁴⁷ Keohane 2011, 100.

⁴⁸ Mason 2008; and Gupta 2010.

⁴⁹ Bernstein 2005.

⁵⁰ Benner et al. 2005.

⁵¹ Bernstein 2011.

⁵² Hurd 1999.

In sum, liberal institutionalism emphasizes procedures to bring together state and nonstate interests in international institutions, which are conceived of as critical to secure institutional legitimacy and openness. Democratic legitimacy is advanced by institutional reform to increase transparency, rather than by challenging the primacy of state-centric decision-making and recasting national democratic models of electoral democracy.

Transforming Global Environmental Politics towards Global Deliberative Democracy

Deliberative democracy is frequently conceived of as the most viable model for democracy beyond the state.⁵³ It is conducive to international society as it downplays the role of boundaries. It represents democracy without electoral representation and *demos*: deliberative accounts of democracy do not rely on a predefined community. Deliberative democracy is compatible with the structures of world politics, which are characterized by their non-hierarchical, non-electoral, and non-territorial features. Yet it aims to transform global governance toward discursive democracy. The democratization of global governance goes through strengthening the discursive quality of transnational public spheres rather than institutional building toward a world polity. Legitimacy stems from free, inclusive, and unconstrained public deliberation between equal participants, revolving around the notion of ideal procedure for deliberation and decision-making. Deliberative accounts of democracy have been taken up by scholars in environmental politics as a route to shape both more legitimate and more effective policies.⁵⁴

International regimes can be conceived of as public spheres to promote deliberation on norms such as transparency and participation.⁵⁵ The transnational public sphere and global civil society play a central role in deliberative accounts of global democracy.⁵⁶ Civil society participation within international regimes will stimulate the use of arguments and public scrutiny of policy choices.⁵⁷ A vital discursive contestation in civil society can counter “global technocracy” of scientific elites and diplomats found in interstate bargaining and international bureaucracies. Two kinds of deliberative processes can be identified: deliberation within institutions, regimes, and international negotiations and deliberation in an independent transnational public sphere outside the venues of authoritative decision-making. Accordingly, in international environmental regimes, civil society exercises discursive influence on formal negotiations and collective decision-making as well as promotes a transnational public sphere independent from sovereign authority. In elaborating a deliberative system that can be applied to local, national, and global governance levels, Dryzek distinguishes between the public space exhibiting a diversity of viewpoints and the empowered space constituting sites of authoritative decision-making.⁵⁸ Civil society can be conceived of as a transmission belt to empowered spaces (of international organizations and interstate negotiations) from public transnational spheres of civil society activism and protest.

A deliberative democracy perspective emphasizes the importance of global public spheres for civil society contestation at multilateral environmental summits. Environmental diplomacy epitomizes emergent forms of deliberative or participatory multilateralism, which institutional-

⁵³ Risse 2004.

⁵⁴ Smith 2003; Baber and Bartlett 2005; Bäckstrand et al. 2010; and Stevenson and Dryzek 2012.

⁵⁵ Payne and Samhat 2004.

⁵⁶ Dryzek 2009.

⁵⁷ Nanz and Steffek 2004, 321.

⁵⁸ Dryzek 2009, 5.

ized civil society deliberation. The mega-conferences on environment and UN climate summits can be conceived of as an emergent “transnational deliberative system,”⁵⁹ “global public domain,”⁶⁰ or “transnational neopluralism.”⁶¹ International environmental negotiations in sustainable development, biodiversity, and climate change have generous accreditation procedures for nonstate actors compared to other policy areas. Many formal negotiation sessions in annual conference of parties with respect to UN treaties on climate, biodiversity, and sustainable development are open to nonstate observers. The plural sites for debate and contestation in official negotiations, organized side-events, and alternative civil society forum approximate as a transnational public sphere where social movements and civil society actors engage in a dialogue attempting to influence policy-makers. Civil society can act as both an insider and an outsider. Apart from the official negotiation session where NGOs as observers can make statements, an important forum for civil society debate in climate change diplomacy is the side-events held in conjunction with the intergovernmental negotiations. Parallel with the official negotiations was the alternative People’s climate summit. Moreover, the global climate justice movement, which can be seen as an offspring from the anti-globalization movement in Seattle in 1999, provides counter-discourses. Despite the multitude of civil society activists, the climate negotiations for example, have been described as a backlash against civil society, even reinforcing the disenfranchisement of social movements and stakeholders.⁶² The UN summits on sustainable development and climate change in many respects marked the peak of deliberative multilateralism, which conforms to ideals of transnational discursive democracy with multiple and overlapping public spheres of discursive contestation, from official negotiations to the alternative civil society forum. In sum, models of global deliberative democracy draw attention to the transformative potential of transnational discursive sites for civil society influence, protest, and contestation.

Critics to the Prospects of Democratizing Global Environmental Politics

A diverse number of critical perspectives, which are anchored in neo-Gramscian and Foucauldian thought, challenge the arguments of liberal institutionalism and deliberative democracy where stakeholder and civil society participation are seen as instruments to alleviate the democratic deficit of global governance. They are skeptical of the ambition of liberal institutionalism to reform multilateral institutions, the cosmopolitan utopia of a world government, and of the idea that civil society represents a democratizing force and is part of a deliberative transnational sphere. These visions of global democracy ignore the ways in which power inequalities permeate international institutions and mask power relationships. Multilateral institutions have a neoliberal bias, and are captured by the agendas of Northern countries while developing countries are marginalized. Hence global governance is conceived as neoliberal hegemony as “good governance” and global democracy imply Western hegemony. The cosmopolitan project of building a supra-state environmental organization would be an eco-colonialist endeavor dominated by the powerful Western countries.⁶³ Liberal institutionalism is rejected in favor of direct action and resistance, building on traditions of direct and participatory democracy. The view that global civil society holds the promise of democratizing

⁵⁹ Dryzek 2009.

⁶⁰ Ruggie 2004.

⁶¹ Cerny 2009.

⁶² Fisher 2010.

⁶³ Najam 2003.

global governance is also contested. Neoliberal hegemony operates through the language of civil society participation.⁶⁴

In numerous critical perspectives, global social movements (anti-globalization, environmentalism, feminism, climate justice, and so on) are conceived as key forces in challenging the inequitable power structures, which defines the global institutional framework and providing hope for global democratic governance.⁶⁵ They are anti-systemic and anti-establishment and therefore do not include the corporate sector. Critical approaches hold that transnational corporate power permeates both Bretton Woods and UN institutions. Instead, democratic legitimacy will be enhanced through mobilizing social movements from the global to the local level, conforming to models of radical participatory democracy. The critical perspectives have in common that the sovereignty principle needs to be abandoned in favor of multiple and overlapping self-governing communities, since democracy cannot be contained in the sovereign territorial state.

In the context of global environmental governance, critical approaches regard global democracy as more a matter of rhetoric than of substance. Power structures, such as sovereignty, capitalism, scientism, and patriarchy, are inconsistent with the principles of ecological sustainability and indeed are generative of the environmental crisis.⁶⁶ The failure of incrementalist environmental multilateralism in the liberal fashion is stressed.⁶⁷ The stakeholder forum and dialogues represent pseudo and symbolic participation that conceal relationships of power and powerlessness underpinning international environmental governance. New forms of market-based environmental governance signify the retreat of the state and the rise of transnational corporate power. The real and authoritative executive power in global environmental governance lies outside UN and is vested in the Bretton Woods institutions. Sustainable development is subordinated to free-tradism and corporate power. Civil society should redefine its role as “resistance globalism” rather than professionalized insider activism.⁶⁸ Foucauldian scholars cast civil society participation as the governmentality of regulation and multilateral summitry theater.⁶⁹

Conclusion

Since the first Earth summit in Rio de Janeiro in 1992, multilateral environmental diplomacy has become a site for participatory and deliberative innovations to include civil society and societal stakeholders. As a corollary, questions of democracy, accountability, and legitimacy have emerged as key research areas in global environmental politics. Civil society and NGO participation in international negotiations is frequently seen as means to democratize global environmental politics. This chapter has linked research on the democratic legitimacy of global environmental governance to IR theories of global democracy beyond the nation state. It has examined how competing models of transnational democracy – liberal institutionalism, global deliberative democracy, and critical perspectives – are reflected in the academic debates on the democratic credentials of global environmental governance.

⁶⁴ Ford 2010.

⁶⁵ O'Brien et al. 2002; and Elliott 2002.

⁶⁶ Paterson 2001.

⁶⁷ Park et al. 2007.

⁶⁸ Elliott 2002, 69.

⁶⁹ Death 2011.

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40 Ecological citizenship revisited

*Andrew Dobson*¹

I had two intentions when I published a book called *Citizenship and the Environment* in 2003. First, to make a contribution to the boom in theorizing about issues surrounding citizenship as a concept, and second, to intervene in policy debates regarding ways of encouraging pro-environmental behavior. Since publication there have been a number of different reactions to the book in both these contexts, and I would like to take this opportunity to outline these developments and to offer some responses to them. I hope this will push along a little further the already flourishing field of citizenship and environment studies.

First, though, I need to outline the basic argument of the book. The question that confronts anybody analyzing the relationship between citizenship and the environment is whether the main traditions of citizenship can “contain” the environmental problematic. Put differently, is the “environmental citizen”² a kind of liberal, civic republican or cosmopolitan citizen – or something else altogether? I examined each of these grand citizenship traditions and came to the conclusion that while each of them contained something that we would recognize in a putative environmental citizenship, none of them mapped exactly on to it.

Briefly, then, liberal citizenship shares with environmental citizenship the idea of rights – especially environmental rights, and even more especially the idea of the right to environmental or ecological space. Liberal citizens are thus bearers of rights, and we can see how this language – and this idea – is easily transposed to the environmental context. Next, civic republican citizenship offers three important notions for environmental citizenship: the idea of the common good, the concept of “virtue,” and the primacy of obligations over rights. Thus environmental problems are so often problems that involve a trade-off between what is good for the individual and what is good for the community of which s/he is a member. Unlike liberalism, where individual preferences are broadly sacrosanct, civic republicanism allows for the possibility of individual preferences being altered in the light of what is good for the community at large. Again, while liberal citizenship is not free of virtue-talk, it is much more a part of the civic republican tradition where the virtues are those that sustain the republic. There is thus a close link between virtue and the common good in civic republicanism. Finally, citizenship is a site where the contrasting yet linked notions of rights and obligations are constantly in play. These are reciprocal, but not always in equal balance in citizenship theory and practice; thus liberalism tends to stress the rights of the citizen while civic republicanism tends to stress the obligations. To the degree that environmentalism is connected with obligations (to conserve the environment, to do justice to future generations,

¹ Some of the remarks made in this chapter draw on the Foreword to the Spanish edition of *Citizenship and the Environment*, *Ciudadanía y medio ambiente* (Dobson 2010a).

² In what follows I refer to both the environmental and the ecological citizen. I take the former to refer to the generic linking of citizenship with the environment, while the latter refers to a particular understanding of this linkage, irreducible to any of the grand traditions of citizenship theorizing (liberal, civic republican, cosmopolitan), and explained in detail in Dobson 2003.

to ensure that sustainability is not achieved at the expense of social justice, for example), this aspect of civic republicanism is important to notions of environmental citizenship.

Yet while both liberalism and civic republicanism can contribute to a notion of environmental citizenship they both lack certain features that we might associate with it. In particular, both liberal and civic republican citizenship are bounded citizenships in the sense that the rights and obligations, the virtues and the “common” in the idea of the common good all relate to membership of a given state. This is difficult to square with environmental citizenship which appears to demand *transnational* rights, obligations and virtues, and a beyond-the-nation-state notion of what the common good entails.

This suggests that cosmopolitan citizenship might be a useful source for thinking about environmental citizenship as it has an explicitly transnational view of citizenship. I do believe that cosmopolitan notions of transnational rights and obligations play a part in environmental citizenship, but my view of what constitutes the “space” of environmental citizenship complicates the picture rather. The space of citizenship for cosmopolitans is the cosmopolis, which potentially translates rather neatly – in environment-speak – into the “earth” or the “planet.” This looks promising from the point of view of developing a citizenship for the environment. The problem with this approach, though, is that it deals rather poorly with the “motivation question” – that is, why should we care about people on the other side of the planet who we have never met? Cosmopolitanism seems to demand a selflessness that is beyond the reach of most people most of the time – a form of Samaritanism that religions have struggled for centuries to embed in cultures around the world. This is not to say that Samaritanism is undesirable, only that it is perhaps not the best foundation on which to build environmental citizenship – a form of citizenship which after all has the idea of *action* at its heart.

The alternative I develop in *Citizenship and the Environment* is a form of “post-cosmopolitanism” in which the motivation for action comes from potentially or actually causing harm to distant strangers rather than from membership of a common humanity, as in influential cosmopolitan accounts. The account I give trades on the notion of environmental harm, broadly understood as the occupation of an unjust amount of environmental space. Thus the space of environmental citizenship is the “ecological footprint,” which is an expression of the impact that individuals, organizations and communities make on their environment. In principle everyone is entitled to the same amount of ecological space, consistent with remaining within the limits of sustainability. The ecological footprint is the site of both the rights and the obligations of ecological citizenship in that we all have a *right* to the appropriate amount of ecological space, and an *obligation* to make sure that any ecological footprint with which we are associated (our own, that of our home, workplace and so on) is not so unjustifiably large as to cause harm to other people. These “other people” could of course be anywhere on the planet (or even in the future), and what connects me to them and underpins my obligation to them is my ecological footprint relation with them. Robyn Eckersley draws a distinction between “humanitarian cosmopolitanism” in which “moral obligations arise from the mere fact of our common humanity and our capacity to render assistance,”³ and “culpability cosmopolitanism” in which “moral obligations arise from some kind of *culpable causal link* between perpetrator and victims.”⁴ In this terminology, ecological citizenship has at its heart a form of culpability cosmopolitanism.

³ Eckersley 2007, 679.

⁴ Eckersley 2007, 679–80 (emphasis in the original).

I mentioned earlier that environmental citizenship shares with republican citizenship a concern for virtue. It should be clear from the account above that the first virtue of ecological citizenship is justice: it is a matter of sharing ecological space equitably. Yet while this is the first virtue, ecological citizenship shares the idea with some versions of feminist citizenship that care and justice are not alternative virtues but complementary ones. Thus in ecological citizenship care and compassion are contributory virtues in that they are conducive to the doing of justice. Ecological citizenship borrows one further insight from feminism, with the recognition – unusual, if not unique, in citizenship theory – that citizenship can be conducted in private as well as in public. Generally, citizenship is regarded as an activity of the public sphere carried out in public spaces, but in line with the observation that private actions can have public consequences (and this is self-evidently true when we think of how much of our ecological footprint is created through our activities in the private sphere), it seems inappropriate to restrict citizenship to the public sphere only.

In sum, ecological citizenship can be defined as pro-environmental practice, in public and in private, driven by a belief in fairness of the distribution of environmental goods, in participation, and in the co-creation of sustainability policy. With that brief summary of ecological citizenship in mind we can now consider some criticisms of the idea, and some potential responses.

It will be clear from the outline above that, in the main, the project was an exercise in normative political theory: I had little expectation at the time that the normative elements in ecological citizenship would be tested “in the field.” In other words I neither looked for, nor expected there to be, any empirical evidence for the existence of “ecological citizens.” (At the time, indeed, I pointed out that the normative claims made in *Citizenship and the Environment* were “unverified by any empirical evidence.”⁵) After the book’s publication, though, I became aware that the principles of ecological citizenship that I had described in it were being used as a framework for examining and analyzing the actual behavior of people. An example of this was work done by Johanna Wolf in the context of her doctoral study of two Canadian west coast communities.⁶ I was fortunate enough to be one of the examiners of her PhD and it was striking to see the extent to which the respondents in her surveys and interviews articulated the reasons for their pro-environmental behavior in terms that were recognizable as “ecological citizenship.” This is not to say that her respondents self-described themselves as ecological citizens, of course, but that the motivations, understandings and values for pro-environmental behavior they reported are recognizable as those I describe in Chapter 3 of *Citizenship and the Environment*. “This analysis presents strong evidence that practising ecological citizenship motivates individuals’ responses to climate change,”⁷ write Wolf and her colleagues.

Of course the sample in Wolf’s work is very small – 38 interviewees – and work like hers is always open to the charge of exceptionalism, lacking a broader representative relevance. To a degree this charge is met by another piece of empirical research carried out by colleagues in Sweden, where 4,000 respondents were surveyed in four Swedish counties.⁸ This is a much bigger number, and the results were similar to those obtained by Wolf: “people in general tend to ascribe the motivational values included in the self-transcendence cluster (altruism) a far greater

⁵ Dobson 2003, 208.

⁶ Wolf et al. 2009.

⁷ Wolf et al. 2009, 519.

⁸ Berglund and Matti 2006.

importance as guiding principles in life than the opposing values of self-enhancement (egoism), indicating that the citizen role is indeed important to account for in policy-making.”⁹

Again in Sweden, Sverker Jagers has taken the empirical study of ecological citizenship a stage further by developing a systematic way of operationalizing the idea in the empirical context, thereby providing a research tool that could in principle be used by researchers anywhere.¹⁰ Jagers’ conclusions point toward some support for the idea that ecological citizens already exist “out there,” but also toward the need for further research to be conducted:

In summary, the results indicate both that there is already a group of individuals (in Sweden) who at least overlap some of the ecological citizen standards (that is, willingness to act) argued for by theorists like Dobson, and that we may have identified a set of factors that appear to cause this willingness. Yet much research remains before any more definitive conclusions can be drawn regarding real prospects for an emerging ecological citizenship and issues such as what factors and measures would facilitate and be required for such a development to take place.¹¹

Inevitably there have also been studies where no sign of ecological citizenship has been found.¹² It is also true to say that empirical studies are contradictory among themselves. So while, as we have seen, Wolf, Jagers, and Matti all find evidence for the existence of ecological citizens, Johann Martinsson and Lennart Lundqvist argue that only a “tiny” proportion of Swedish citizens exhibit both “green attitudes and green ecological practice” – just 3 percent, in fact.¹³ This result is all the more surprising since Martinsson and Lundqvist draw on exactly the same sample as that used by Jagers, with the rather different outcome described in the paragraph above. This could be taken as suggesting that ecological citizenship is as rare as hens’ teeth, but a more plausible conclusion is that there is as yet little agreement among empirical investigators as to how to search for ecological citizens. Overall it seems that since 2003 enough empirical evidence has emerged to suggest that further research on the extent to which ecological citizenship exists in the “real world” is worthwhile.

There are at least three ways in which the empirical findings thus far could be further tested. First, the number of studies itself is small; we need more studies to be done. Second, these studies could involve a larger number of respondents, interviewees and so on. This would help to test one criticism of the empirical work done thus far: that the research has involved too few people to be able to draw robust and generalizable conclusions. Third, and perhaps most importantly, the research carried out to date is vulnerable to the criticism that the empirical work that has been done is confined to places and spaces where one might *expect* to find ecological citizenship attitudes and behavior: the west coast of Canada, and Sweden, for example. This third strand of empirical research on ecological citizenship, then, should explore the degree to which it exists in different political cultures. We need more studies in liberal-capitalist cultures such as the USA and in relatively recently modernized ones such as Spain, as well in established social-democratic ones such as Sweden.

While this empirical research is going on it is vital to remember the transformative intentions behind the idea of ecological citizenship. This is to say that it is a normative idea which offers reasons why people *ought* to behave in a certain way irrespective of whether

⁹ Berglund and Matti 2006, 566.

¹⁰ Jagers 2009.

¹¹ Jagers 2009, 33.

¹² Flynn et al. 2008.

¹³ Martinsson and Lundqvist 2010, 526–27.

they actually *do* or not. Thus its adequacy as an idea cannot be judged solely in empirical terms. We would not think that the idea of telling the truth was fatally undermined by the finding that only a small proportion of the population actually does it; likewise we should not think that ecological citizenship is necessarily diminished by a series of (rather equivocal, anyway) empirical studies.

However, more empirical research is needed, and one reason for this is that the pro-environmental practice policy toolbox is conspicuously empty as far as “the citizenship approach” is concerned.¹⁴ Most governments seem to believe that people will only be prepared to change their behavior if it is in their perceived self-interest to do so. This has given rise to a series of interventions based on fiscal incentives and disincentives, the theory being that if anti-environmental behavior incurs monetary charges and penalties, then people will want to avoid these charges and penalties and will alter their behavior accordingly.

A key aspect of this policy approach is that it is fundamentally apolitical, in the sense that it refuses to engage the objects of policy (citizens) in debate on the rights and wrongs of policy options. Policy-makers merely select the policy path they believe to be right, and then set-up systems of financial incentives (rewards) and punishments (fines) to encourage people to behave in the way that policy-makers want. In recent times, in the UK at least, this apoliticization has reached a new height (perhaps that should be “depth”) with the enthusiastic deployment of insights from behavioral economics in policy-making. Otherwise known as “nudge” theory, after the eponymous book by Richard Thaler and Cass Sunstein, this policy tool focuses on “choice architecture.” So, just as supermarket designers know that they can influence shoppers’ choices by organizing the shop’s layout, so “nudgers” encourage certain behaviors by shaping the context in which choices are made. Thaler and Sunstein call this “libertarian paternalism.”¹⁵ libertarian in that no-one is explicitly being told what to do, and paternalist in that policy-makers (think they) know what is in our best interests, and do not engage us in policy design. An environmental example of this might be making domestic recycling bins bigger and general waste bins smaller – thus nudging people toward recycling more and throwing away less. “Nudge” is a further step along the road to apolitical politics compared to fiscal incentives in that the objects of policy need not even know that their choices *are* being shaped. Indeed it is optimal from the point of view of the ease of policy implementation that we are *not* aware of what is being done as this leaves less room for the messy business of engaging with the public, explaining policy, and possibly having to compromise.

A good example of the fiscal dis/incentive policy instrument is the traffic “congestion charge.” Increasingly, civic authorities in congested cities around the world have taken to charging car drivers a fee for entering especially busy parts of their cities. The aim is to deter drivers from taking their cars into these city areas, and to encourage them onto alternative forms of transport. The evidence is that this kind of policy works rather well (a traffic reduction of 20 percent in the first few months of the London congestion charge, for example¹⁶). People’s driving habits are changed quite dramatically and quite quickly. So what is there to complain about?

In brief, there are four potential problems with the fiscal dis/incentive route to changing people’s environment-related behavior, and some of these relate to the “nudge” approach too. First, taxes and charges can be rescinded as well as imposed. Taxes and charges are hardly ever

¹⁴ An assessment of environmental citizenship as a route to pro-environmental behavior can be found in Dobson 2010b.

¹⁵ Thaler and Sunstein 2009, 5–6.

¹⁶ Litman 2004, 5.

popular, and politicians might seek election on the grounds of rescinding taxes and charges. Second, the size of the charges required to secure the change in behavior might be politically unpopular – this leaves us, then, with a policy tool that could sometimes be literally unusable.

Third, in a fiscal dis/incentive regime people respond to the fiscal prompt and not to the reasons underlying it. The danger here can be seen if we look again at the first potential problem with this policy tool – that taxes can be rescinded as well as imposed. What would happen if a city's traffic congestion charge were to be removed? Would drivers stay out of their cars, or would they get back into them? When asked this question, most people reply that of course people would get straight back into their cars. The reason for this is that the monetary penalty has disappeared. In the absence of a commitment to the reason underlying the charge – that driving less means less carbon dioxide emission and thus a smaller impact on climate change – people will revert to the behavior from which they were discouraged by the fiscal prompt.

The fourth and final problem is that the fiscal dis/incentive policy tool works with a rather narrow range of human motivational options. It assumes that people are principally motivated by self-interested considerations. Of course it is true that self-interest is a key motivator, but to base environmental behavior policy almost exclusively on this fact is potentially a mistake. Social psychologists have long pointed out the apparently counterintuitive fact that fiscal incentives can sometimes achieve the exact opposite of what they are supposed to achieve, especially when the tool is used in contexts where its use amounts to something akin to what philosophers call a "category mistake." Thus it is well known that when people are offered rewards for donating blood, less blood is donated. The motivations for pro-environmental behavior might be regarded as belonging to the same category as those involved in blood donation – other-regarding, rather than self-regarding. Environmental behavior policies that do not take this possibility into account could be self-defeating. Even in Sweden where, as we saw above, there is evidence for actually-existing ecological citizens, there is also evidence of a mismatch between the reasons people give for their pro-environmental behavior on the one hand, and government beliefs about behavior change on the other: "Regarding the government's depiction of individuals as being citizens or consumers, the former tends to be largely overlooked in Swedish environmental policy."¹⁷

In contrast with fiscal incentives and nudging, environmental citizenship requires both policy-makers and citizens to engage with norms and values. This amounts to the reintroduction of politics into sustainability policy, so arguments about right and wrong, just and unjust are embraced rather than eschewed. Environmental citizens cleave to the normative principles of environmental citizenship, and once they do so their commitment to sustainability policy is likely to be enduring. This contrasts with the superficial commitment to policy achieved by financial incentives and nudging. So while policies aimed at nudging and incentivizing individuals to change their behavior rely on the provision of expert-informed choices, environmental citizens co-create the circumstances in which they act, resulting in lasting pro-environmental behavior change and community benefit.

So much for the practical and policy-oriented implications of ecological citizenship. At the beginning of this chapter I mentioned a second motivation I had for writing *Citizenship and the Environment* – to contribute to growing debates about the nature of citizenship as a concept. A number of criticisms of ecological citizenship have been offered in this context, some of which I am prepared to accept, and one or two of which I am more inclined to resist. These

¹⁷ Berglund and Matti 2006, 558.

criticisms can be found, for example, in the work of Tim Hayward, Teena Gabrielson, Lucie Middlemiss, Alex Latta, Joaquín Valdivielso, Emilio Luque, and Sherilyn MacGregor.¹⁸ Sustained helpful and constructive criticism can also be found in the work of Angel Valencia.¹⁹

These criticisms can be grouped under the following headings: the issue of membership of the ecological citizen community; too much emphasis on agency and not enough on structure; too much reliance on education as a means of “creating” ecological citizens; technically speaking, ecological citizenship is not a form of citizenship at all; the ecological footprint cannot be regarded as a “political” space, and far less a space within which citizenship can operate; ecological citizenship is conceived too instrumentally and pays too little attention to the democratic and democratizing elements in the idea of citizenship; and finally the feminist criticism that ecological citizenship, with its insistence that private actions can have important public consequences, places an unfair burden of responsibility on those who already bear too great a responsibility for the reproduction of social life.

As far as membership of the ecological citizen community is concerned, Tim Hayward has written:

The ties of [ecological] citizenship bind in one direction only, on the beneficiaries of the inequalities; the others are effectively cast in the role of “moral patients”. This account does not establish clearly whether there is any political community which includes the victims as citizens. A critical question is whether the victims – i.e. those on the receiving end of ecological deprivation and the obligations deriving from it – can or cannot be ecological citizens.²⁰

Theorists of citizenship are rightly concerned with issues of membership – after all, determining who is or is not a member of any given citizen community determines who is in receipt of the entitlements (and the obligations) that go with citizenship. This preoccupation with membership, however, is mostly confined to debates involving citizenship as *legal status* – the kind of citizenship associated with possession of a passport. Ecological citizenship is less concerned with legal status and more with citizenship as *activity*. From this point of view, membership is not really an issue.

Having said that, though, and to answer Hayward’s question directly, the “victims” of unsustainable behavior can indeed be ecological citizens. This is because it is their right to a fair amount of ecological space that gives rise to the obligation on those who occupy too much ecological space to reduce the size of their ecological footprint. “Victims” and “perpetrators” are thus brought together in a citizenship underpinned by relations of political rights and obligations.

The next criticism that has been leveled at ecological citizenship is that it is too “voluntarist”; that it contains a naive view of the capacities of individual agency to bring about social change. The argument is that theories of change must take into account the structures within which individual agents act, structures which may make it difficult for individuals to reduce the size of their ecological footprint. I think it is fair to say that this issue is indeed undertheorized in *Citizenship and the Environment*, although I do say there that it is important to avoid a “naïve voluntarism that ignores the powerful political and economic interests that structure the world

¹⁸ Luque 2005; MacGregor 2005; Valdivielso 2005; Hayward 2006a, 2006b; Latta 2007; Gabrielson 2008; and Middlemiss 2010.

¹⁹ Valencia 2005.

²⁰ Hayward 2006a, 445.

in unsustainable ways.”²¹ Much more could and should be added to this, and ecological citizenship as individual purposive activity should be embedded in an analysis of structures which takes into account the cultural, organizational, and infrastructural constraints (and maybe, of course, opportunities) on individual agency.²² The result of this might be a greater emphasis on the role of the ecological citizen in “traditional” citizenship activities in civil society and in the public sphere – agitating, campaigning, protesting – as well as on the activities that are often pejoratively categorized under the heading “lifestyle.”

The third criticism relates to the question of how to promote ecological citizenship. The fact that a whole chapter of *Citizenship and the Environment* (Chapter 5) is devoted to education has led some readers to believe that I think schools, colleges, and universities are the best sites we have for ecological citizenship transformation. In fact, though, my beliefs on this score are best summed up by two remarks made almost *en passant*: “the textbook should be replaced by the environmental campaign,”²³ and “an hour’s ‘lived experience’ can produce more politicization than a year in class.”²⁴ The point is that ecological citizenship cannot be “taught,” if by this we mean that people can enter educational institutions with no commitment to the idea or practice, and then emerge fully-fledged ecological citizens. Of course, the scientific and normative seeds of ecological citizenship practice can be sowed in schools and colleges, but the key transformative pivot is what the French call “*le vécu*,” or “lived experience.” Politics is what politicizes, not education. Having said that, this book was written just at the time when the UK government was imposing the teaching of citizenship as a statutory national curriculum subject on all English and Welsh secondary schools, so it seemed appropriate at the time to deal in some detail with this issue. This offers the opportunity to analyze the citizenship curriculum for its potential as a vehicle for the teaching of ecological citizenship. My conclusion in the UK context was (and is) that ecological citizenship could be “legitimately” taught as part of the more general citizenship curriculum – though I am far from believing that ecological citizenship is best promoted through the formal education system.²⁵

The next criticism is that in formal definitional terms, ecological citizenship is not a citizenship at all. Tim Hayward sums up this critique as follows: “The idea of citizenship normally refers, *inter alia*, to a status which arises with membership of a polity and confers on citizens a set of reciprocal responsibilities and rights ... On a conventional understanding, therefore, what Dobson calls ‘citizenship’ would not count as such.”²⁶ From the point of view of citizenship as legal status in relation to a polity that confers citizenship, Hayward is absolutely correct. Such a point of view would also commit Hayward, of course, to denying that cosmopolitan citizenship is a citizenship, because there is no world “polity” and no “membership” criteria. Despite this, the legitimate presence of cosmopolitan citizenship in academic writings about citizenship seems absolutely secure. Once again we need to distinguish between citizenship as legal status and as activity. If we are prepared to accept that citizenship can be regarded as an activity, then the definitional criteria stipulated by Hayward seem less relevant to our case.

The next criticism is also a definitional one. The “ecological footprint” plays a key role in my exposition of ecological citizenship. All conceptions of citizenship contain an account of

²¹ Dobson 2003, 103.

²² Middlemiss 2010.

²³ Dobson 2003, 207.

²⁴ Dobson 2003, 211.

²⁵ Melo-Escribuela 2008.

²⁶ Hayward 2006a, 435.

the citizenship's "political space." Typically, the political space of dominant conceptions of citizenship is the nation state, while for cosmopolitan citizenship it is the "cosmopolis," or the world as a whole. For ecological citizenship, the relevant space is the ecological footprint. Hayward objects to this, though, on the grounds that "the relations as defined in terms of differential ecological space utilisation are precisely not political relations."²⁷ This is because, he says, the "suggestion that ecological space is 'ecological citizenship's version of political space' involves a category mistake: for while neither kind of 'space' maps onto discrete parcels of territory, the former nonetheless refers to the biophysical properties of territory, not to the 'space' within which people have political relations."²⁸ My response is that unequal ecological footprints are an injustice, that (in)justice is a political concept because it involves relations of power, and that therefore the ecological footprint, as an arena in which power is exercised, is a political space.

Another criticism that has been leveled at ecological citizenship is that it is too instrumental. As I said at the beginning of this chapter I do indeed see ecological citizenship as a concept that can and should be put to work in the political arena, as well as a concept that enriches the citizenship research field and political theory more generally. This does leave my treatment of ecological citizenship open to this kind of criticism: "one of the consequences of harnessing the language of citizenship to the end of sustainability has been a rather anemic conception of citizenship which is advanced instrumentally and thereby diminishes the concept's democratic potential."²⁹ If this criticism is valid, though, then it would seem to undermine the instrumental use of practically any political concept – equality, liberty and so on. I see no harm, and certainly no "diminishing of democratic potential," in making political use of equality and liberty, and I would say the same of ecological citizenship.

Finally we need to take account of the feminist criticism that ecological citizenship, with its emphasis on the private sphere, places an unfair burden on women. Feminists have long argued that women often play a double role – working in the labor market and then doing the provisioning and care-giving at home. So feminists such as Sherilyn MacGregor ask us to consider "the implications for women of adding a third or fourth role – that of 'earth caring' – to their already busy lives."³⁰ This is clearly a very important point. There has always been a feminist concern that the claimed universalism of citizenship is in fact a masculinist form of politics that favors the interests of men.³¹ MacGregor picks up the practical implications of this and shows how, if ecological citizenship is to be an emancipatory force, it must take account of the material circumstances of people expected to be ecological citizens: "I would suggest that for any vision of an alternative society to work, and to be an improvement on current arrangements, it must address issues of equity, access, and the conditions of everyday life that are needed to foster democratic participation in the political domain."³² This is important for anyone but especially, as MacGregor points out, for women.

These, then, in summary, are my responses to some of the important criticisms that have been made of ecological citizenship, both as normative idea and as a site of empirical exploration. No doubt I have missed out many critiques of which I am not aware, and I am

²⁷ Hayward 2006a, 438.

²⁸ Hayward 2006a, 438.

²⁹ Gabrielson 2008, 430.

³⁰ MacGregor 2005, 185.

³¹ Young 1989.

³² MacGregor 2005, 185.

sure that the responses I have made will remain inadequate for many. Nevertheless I am grateful for the opportunity provided here to try to strengthen the idea, and I look forward to seeing how the debate around these issues develops in the months and years to come.

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