

**THE COMPROMISE OF LIBERAL ENVIRONMENTALISM**

by

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**A thesis submitted in conformity with the requirements  
for the degree of Doctor of Philosophy  
Graduate Department of Political Science  
University of Toronto**

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## **Abstract**

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This thesis investigates the convergence of environmental and liberal economic norms in international environmental governance since 1972. It argues that the institutionalization of “sustainable development” at the 1992 UN Conference on Environment and Development (UNCED) legitimated this evolution toward “liberal environmentalism.” Norms of liberal environmentalism promote and maintain a liberal economic order with minimum disruptions to ecological systems. This compromise enabled environmental concerns to gain greater prominence on the international agenda. First, the thesis maps the evolution of norms to uncover patterns of environmental governance. Second, it explains why environmental governance developed as it did.

The thesis traces the evolution of environmental norms through the 1972 UN Conference on the Human Environment, the 1987 World Commission on Environment and Development report, and the 1992 UNCED. The focus on norms – which define, regulate and legitimate state (and other actors’) identities, values, and behaviours – draws attention to the content of international governance. Hence, explanations for the observed normative developments address two questions: What actors and institutions carried ideas that led to liberal environmentalism? And, why did the ideas associated with such norms become institutionalized?

After discounting power- and interest-based explanations, the thesis tests two explanations that focus on the causal role of ideas in international politics. It finds that an epistemic communities explanation, which focuses on the influence of a “scientific ecology” community of

experts, fails in a crucial test for the approach. This result challenges the often assumed primacy of science in environmental governance.

The thesis then introduces an alternative, socio-evolutionary, approach which draws on recent work on the evolution of international norms. It argues that to understand how new norms become institutionalized requires an analysis of the interaction of ideas and the social structure they encounter. Three factors determine the success of new ideas and the norms they support: the legitimacy of their source, their fitness with existing international social structure, and the degree to which key actors identify their social interests with those ideas.

The findings contribute to the literature on ideas, norms, and international governance and to an understanding of continuity and change in international politics.

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## **Acronyms Used**

<b>AGGG</b>	<b>Advisory Group on Greenhouse Gases</b>
<b>BCSD</b>	<b>Business Council for Sustainable Development</b>
<b>CFCs</b>	<b>Chlorofluorocarbons</b>
<b>CIDA</b>	<b>Canadian International Development Agency</b>
<b>CITES</b>	<b>Convention on International Trade in Endangered Species of Wild Fauna and Flora.</b>
<b>EC</b>	<b>European Community</b>
<b>ECOSOC</b>	<b>United Nations Economic and Social Council</b>
<b>ENGO</b>	<b>Environmental Non-Governmental Organization</b>
<b>EPA</b>	<b>Environmental Protection Agency (United States)</b>
<b>EU</b>	<b>European Union</b>
<b>FAO</b>	<b>United Nations Food and Agricultural Organization</b>
<b>FCCC</b>	<b>Framework Convention on Climate Change</b>
<b>FRG</b>	<b>Federal Republic of Germany (West Germany)</b>
<b>G-7</b>	<b>Group of Seven</b>
<b>G-77</b>	<b>Group of Seventy-Seven</b>
<b>GARP</b>	<b>Global Atmospheric Research Programme</b>
<b>GATT</b>	<b>General Agreement on Tariffs and Trade (WTO after 1994)</b>
<b>GCC</b>	<b>Global Climate Coalition</b>
<b>GDP</b>	<b>Gross Domestic Product</b>
<b>GDR</b>	<b>German Democratic Republic (East Germany)</b>
<b>GEF</b>	<b>Global Environment Facility</b>

<b>GEMS</b>	<b>Global Environmental Monitoring System of the U.N.-sponsored Earthwatch Network</b>
<b>IBP</b>	<b>International Biological Programme</b>
<b>ICC</b>	<b>International Chamber of Commerce</b>
<b>ICSU</b>	<b>International Council of Scientific Unions</b>
<b>IGBP</b>	<b>International Geosphere-Biosphere Programme</b>
<b>IIASA</b>	<b>International Institute for Applied Systems Analysis</b>
<b>INFOTERRA</b>	<b>International Referral System of the Earthwatch Network</b>
<b>IPCC</b>	<b>Intergovernmental Panel on Climate Change</b>
<b>IPE</b>	<b>International Political Economy</b>
<b>IUCN</b>	<b>World Conservation Union -- renamed 1990, formerly International Union for the Conservation of Nature and Natural Resources</b>
<b>JI</b>	<b>Joint Implementation -- also known as AJJ: Activities to be Implemented Jointly</b>
<b>MAB</b>	<b>Man and the Biosphere Programme</b>
<b>NIEO</b>	<b>New International Economic Order</b>
<b>NGO</b>	<b>Non-Governmental Organization</b>
<b>ODA</b>	<b>Official Development Assistance</b>
<b>OECD</b>	<b>Organization for Economic Cooperation and Development</b>
<b>PPI</b>	<b>Progressive Policy Institute</b>
<b>PRC</b>	<b>People's Republic of China</b>
<b>SCOPE</b>	<b>Scientific Committee on Problems of the Environment of ICSU</b>
<b>SSTs</b>	<b>Supersonic Transports</b>
<b>UNCED</b>	<b>United Nations Conference on Environment and Development, 1992</b>
<b>UNCHE</b>	<b>United Nations Conference on the Human Environment, 1972</b>

UNCLOS III	1982 United Nations Convention on the Law of the Sea
UNCSD	United Nations Commission on Sustainable Development
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNGA	United Nations General Assembly
WCED	World Commission on Environment and Development (Brundtland Commission)
WCS	World Conservation Strategy
WCRP	World Climate Research Programme
WMO	World Meteorological Organization
WTO	World Trade Organization
WWF	World Wide Fund for Nature renamed in 1990 -- formerly World Wildlife Fund

## Chapter One

### Introduction

*We cannot say with certainty how much longer mankind [sic] can postpone initiating deliberate control of his growth before he will have lost the chance for control. We suspect on the basis of present knowledge of the physical constraints of the planet that the growth phase cannot continue for another one hundred years. Again, because of the delays in the system, if the global society waits until those constraints are unmistakably apparent, it will have waited too long.*

-- The Limits to Growth 1972

*The concept of sustainable development does imply limits -- not absolute limits but limitations imposed by the present state of technology and social organization on environmental resources and by the ability of the biosphere to absorb the effects of human activities. But technology and social organization can be both managed and improved to make way for a new era of economic growth.*

-- Our Common Future 1987

Few truly global concerns in the late 20th century held the potential to substantially transform the nature of global politics and society. Contenders might include the fear of nuclear annihilation or advances in technology and telecommunications. The former arguably transformed the nature of conflict between the major powers while the latter made possible exponential increases in financial and other business transactions across vast distances, enhanced the spread of culture, and enabled vast changes in the patterns of interaction between a wide range of actors on the global stage.

Looking back 30 years, one might have predicted that the concern over the state of the global environment could similarly transform our understanding of global politics. Responses to such concerns have called for a whole new notion of planetary rather than national security, thrown into question the assumption of competing interests of nation-states and the ability of such units to manage global problems, and forced humankind to question the wisdom of conducting global economic relations as if they were independent from the ecological systems that sustain life on the planet.

The earliest ideas that informed international attempts to manage the Earth's resources supported such transformations. The philosophical statement of planetary concern commissioned for the first global environmental conference -- the United Nations Conference on the Human Environment in 1972 -- included calls for "loyalty to the Earth" that recognized planetary interdependence of all life, the adoption of global (as opposed to national) responses to environmental problems, and massive changes in overconsumptive lifestyles of the wealthy. Only One Earth, as it was called, also criticized existing international institutions for lacking a sense of planetary community and commitment.<sup>1</sup> High profile studies such as The Limits to Growth took an even tougher stand against overconsumption and warned that growth in population and production could not continue on course without leading to the collapse of our social and economic system.<sup>2</sup> No one expected revolutionary changes to occur overnight, but an assumption continues to prevail that as the international community pays more attention to environmental problems, responses will move slowly toward a more ecological understanding of our world and humankind's place in it. At the least, our responses to environmental problems themselves will lead us in an ecological direction.

This dissertation examines whether indeed that is the case. It does so by detailing how international concern for the global environment moved from these initial formulations to the current concern with "sustainable development," and what form of international governance "sustainable development" entails. This evolution of environmental governance takes on added significance when one considers that environmental issues finally reached the mainstream of international relations in the early 1990s only when they took this form.

Whether or not sustainable development constitutes a truly transformative idea, international lawyers and political scientists note that the 1992 Earth Summit in Rio de Janeiro institutionalized ideas associated with this new conception of environmental governance. Some call it a "paradigm shift" to a new international law of sustainable development from previous formulations of both international law of the environment and of development.<sup>3</sup> Others argue

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<sup>1</sup>Ward and Dubos 1972. For a summary see McCormick 1989, 95-96.

<sup>2</sup>Meadows et al. 1972.

<sup>3</sup>Sand 1993, 378. See also Pallemmaerts 1996.

that the Earth Summit “succeeded in formulating an umbrella regime in the field of sustainable development” that will continue to shape specific responses to environmental problems well into the future.<sup>4</sup> I will argue that these institutionalized ideas are the most significant shift in environmental governance over the last 25 years. Not only did they bring environmentalism into the mainstream of international governance, they did so by reformulating environmental concerns in the context of a liberal international economic order. In that way, sustainable development does mark the institutionalization of environmental concern, but not in the way originally envisaged.

The compatibility of environmental concern, economic growth, the basic tenets of a market economy, and a liberal international economy is now conventional wisdom among many policy makers, diplomats, and a large number of non-governmental organizations throughout the world. It is sometimes forgotten that this formulation of the environmental problematique differs substantially from its earlier formulations in the late 1960s and early 1970s when the first concerted efforts at wide-scale global responses to environmental problems began. Why, then, when the international community finally took environmentalism seriously, was it only considered in the context of an economic program that not only encouraged growth, but demanded it? Why has international environmental governance evolved into what I will call the compromise of liberal environmentalism?

These questions are too often overlooked in academic and policy work that focuses on the quest to design better institutions or respond to immediate and pressing problems. While these are worthy projects, this study orients itself more toward what Robert Cox calls “critical theory.”

An exercise in critical theory need not invoke complex methodological or epistemological challenges to how scholars ought to go about understanding the world. Rather, it simply poses the question differently than those involved in the important tasks just listed. As Cox puts it, “Critical theory stands back from the existing order of things to ask how that order came into being, how it may be changing, and how that change may be influenced or channelled... Its aim is the understanding of structural change.”<sup>5</sup> In this spirit, this study asks two questions about

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<sup>4</sup>Sjöstedt et al. 1994, 5.

<sup>5</sup>Cox 1992, 3.



international environmental governance: How did the current form of international environmental governance evolve since the first major international environmental conference in 1972? And why did it evolve into liberal environmentalism? The remainder of the introduction discusses how the dissertation will approach these questions.

### **The Evolution of International Environmental Governance**

Concern over the global environment has focused scholarly attention on how best to build institutions to manage the Earth's resources. While an important project, such studies lack a critical examination of what kind of governing norms such institutions embody or why those norms came to dominate global environmental governance. Rather, an assumption often pervades the mainstream academic literature that any cooperation on environmental problems means progress toward a more ecological international order. A critical examination of the evolution of environmental norms shows that assumption to be faulty.

Instead, I argue that norms of environmental protection have gradually converged with liberal economic norms in international environmental governance since 1972. The institutionalization of "sustainable development" at the 1992 UN Conference on Environment and Development (UNCED) legitimated this convergence toward what I label "liberal environmentalism." This normative compromise promotes and maintains a liberal economic order while it attempts to minimize disruptions to ecological systems. It also enabled environmental concerns to find such a prominent place on the international agenda. The dissertation first maps the evolution of norms to uncover patterns of environmental governance. Second, it explains why environmental governance developed as it did.

Chapter two undertakes the first task in detail. However, it should not be read as yet another exposition of what "sustainable development" means. Numerous works devoted to that topic only serve to highlight the ultimately elusive quest for a definitional consensus. The widely quoted definition in the Brundtland Commission report -- "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" -- identifies a compromise between competing values including growth, conservation, and inter-

and intra- generational equity.<sup>6</sup> As such, it is open to a myriad of interpretations. By the Earth Summit in 1992, various authors had found as many as 40 definitions of the concept, and the Rio Declaration on Environment and Development, although it uses the term, does not even attempt a consensus definition.<sup>7</sup> As noted by the International Institute for Applied Systems Analysis, the concept “is viewed quite differently by industrialists, economists, planners and environmental and ecological scientists....”<sup>8</sup>

Instead of unpacking the concept itself, chapter two examines the international political and economic norms invoked in the name of sustainable development and traces their evolution. I argue that when “sustainable development” appears as a goal in international environmental agreements, policy positions of multilateral agencies, or pronouncements of a number of intergovernmental and even many non-governmental fora, it evokes an identifiable set of norms that underlie current attempts at international environmental governance.

I detail the evolution of international environmental norms through three key points of norm articulation: the 1972 United Nations Conference on the Human Environment in Stockholm, the 1987 World Commission on Environment and Development report, and the 1992 United Nations Conference on Environment and Development in Rio de Janeiro. I pay particular attention to how ideas developed that influenced the formulation of environmental governance through those episodes, who carried those ideas, and what form they took when they became institutionalized. Each event serves as a marker for what is actually an ongoing process of normative evolution. Following each event I describe the norm-complex, for lack of a better term, that represents the normative basis of environmental governance at that time.

The norm-complex articulated at Stockholm did contain both environment and development norms, but primarily emphasized the environmental protection side of the equation, as did the practices of international institutions, transnational activities, and international cooperative efforts following the conference. The Brundtland Commission report attempted a

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<sup>6</sup>WCED 1987, 43. Note, the definition appears in altered form elsewhere in the report. This definition is the most widely cited.

<sup>7</sup>Brooks 1992. For a list of about 25 definitions, see Pearce et al. 1989, 173-185. For the Declaration see IDRC 1993.

<sup>8</sup>IIASA proposal for a workshop on “Sustainable Development: Principle and Criteria,” quoted in Caldwell 1990, 207.

synthesis of environment and development agendas and reflected what I call a Keynesian-like compromise. In it, liberal interdependence that generated growth would be tempered by managed interventions to cushion and facilitate adjustment in the South and direct development on a path less likely to harm the environment. Rather than call this norm-complex one of sustainable development, I label it “managed sustainable growth.” I do so to contrast it with the currently dominant norm-complex of “liberal environmentalism” institutionalized at UNCED. The latter accepts the liberalization of trade and finance as consistent with, and even necessary for, international environmental protection. It also promotes market and other economic mechanisms (such as tradeable pollution permit schemes or the privatization of commons) over command and control methods (standards, bans, quotas, and so on) as the preferred method of environmental management. The concept of sustainable development, while it legitimated this shift in norms, now masks this compromise that characterizes international environmental governance.

A number of studies identify various elements of what I call liberal environmentalism, although they use terms such as ecological modernization or simply sustainable development.<sup>9</sup> Many of these studies aim to uncover contradictions in such concepts. Some also critique the form of environmental governance promoted as too accepting of the status quo of state control and of patterns of economic development and practices that created most of the world’s environmental problems in the first place.<sup>10</sup> These critiques are not the focus of this study, although the concluding chapter addresses various implications of the institutionalization of liberal environmentalism. Instead, the value added here is to uncover how and why liberal environmentalism became institutionalized, at least at the international level, rather than simply offering a critique of the outcome. To date, no study has carefully traced through the institutionalization of such ideas. A critical understanding of the constraints and opportunities for change in international environmental governance requires understanding how that structure of governance developed over time.

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<sup>9</sup>For example, Hajer 1995; Weale 1992; Pallemaerts 1994, 1996; Chatterjee and Finger 1994; Sachs 1993; and Hawkins 1993.

<sup>10</sup>See especially Chatterjee and Finger 1994.

## **Explaining the Evolution of Environmental Governance**

Unlike studies that focus on how best to achieve international cooperation on environmental problems, the second part of the dissertation explains why a particular set of norms dominates such arrangements. The focus on norms turns attention to the content of international governance. It serves as a corrective to the rational cooperation literature which takes the normative underpinnings of cooperative arrangements for granted by focusing on functional requirements or how agreements came to be, not their content.<sup>11</sup> I define governance broadly as the methods or means of realizing shared values, interests and goals that may or may not derive from a formal centralized political power.<sup>12</sup> At the basis of governance are international norms, defined as shared conceptions of appropriate behaviour or action. In other words, norms define, regulate and legitimate state (and other key actors') identities, interests, and behaviour.<sup>13</sup> While identifying institutionalized norms does not cover all aspects of governance, norms are at the heart of all governance structures. Explanations for the observed normative developments in environmental governance address two questions: What actors and institutions carried ideas that led to liberal environmentalism? And, why did the set of ideas associated with norms of liberal environmentalism become institutionalized?

Chapters three and four put forward two competing explanations that focus on the causal role of ideas in international governance. Such a focus is appropriate given the overriding concern with the content of international governance. Before turning to these explanations, however, I discuss why standard interest or power-based approaches are inappropriate for this study. I show that most attempts to build theories around such approaches leave the content of governance (by which I mean its normative basis) unexplained. I also show that a simple extrapolation of outcomes from given interests fails to explain the changes in the normative basis of environmental governance since 1972. Furthermore, even those theories that do attempt to link the content of governance to power and interests have a poor empirical record when it comes

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<sup>11</sup>For example, Young 1989, 1994; and Haas, Keohane and Levy 1993 emphasize the institutional conditions for cooperation.

<sup>12</sup>International relations scholarship has recently stressed "governance without government." Rosenau and Czempiel 1992; Finklestein 1995; and Young 1995.

<sup>13</sup>For a fuller discussion of the constitutive and regulative aspects of norms see Dessler 1989; Florini 1996, 364-365; and Busumtwi-Sam and Bernstein 1997.

to explaining outcomes in environmental governance. These inadequacies point to the need to move beyond rationalist and interest-based approaches to alternatives that examine the causal role of ideas in international relations.

For this project, a major problem arises with interest-based explanations because they assume away the content of interests or import them uncritically. Depending on the theory of world politics employed, interests in international politics are assumed to be relatively stable and based on core values such as economic costs/benefits or protection of physical security from outside attack. However, for a study such as this concerned explicitly with the content of governance, it seems logical to look to knowledge or ideas-based explanations since only they focus on what set of ideas dominate attempts to solve the problem in question. Still, I take seriously Garrett and Weingast's assertion that an ideas-based explanation first requires a null hypothesis that only material interests matter.<sup>14</sup>

Interest-based explanations are primarily concerned with whether outcomes reflect given sets of interests. The methodological issue then becomes how to model their interaction to get good predictions on outcomes one wishes to explain. Such outcomes are usually dichotomous -- agreement/no agreement, action/no action, or cooperation/conflict -- on the concern in question. A number of studies in this vein provide interesting analysis of cooperation on particular international environmental issues. For example, Sprinz and Vaahtoranta, while not explicitly presenting a theory of cooperation, use an interest-based explanation to show why some countries more strongly supported international environmental cooperation on controlling acid rain and ozone depletion than others.<sup>15</sup> Paterson and Rowlands, in two separate studies, assess the merits of interest-based explanations, among others, to explain the politics of global responses to climate change. Such explanations rely on modelling the strategic interaction of actors with given interests or they hypothesize that when core interests of powerful actors are threatened (for example, when they are vulnerable to costly environmental damage), those actors, either by threat, coercion, or by shouldering extra costs, will ensure action is taken in response to those threats.

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<sup>14</sup>Garrett and Weingast 1993, 203.

<sup>15</sup>Sprinz and Vaahtoranta 1994.

In realist thought, interests are taken as given and the interests of dominant state-actors generally prevail, although the ability of those actors to prevail is conditioned on factors such as the current distribution of capabilities in the international system. Recent institutionalist literature broadens the focus from the interaction of rational state actors to include institutional, transnational, and/or domestic factors to the mix of variables considered.<sup>16</sup> Whatever the merits of specific rational-interest approaches to explaining cooperation (the critiques of specific theories are many and varied and need not be rehearsed here), by themselves they offer little in the way of analysis of the content of cooperative arrangements that prevail.

Supporters of a rational interest-based approach might still counter with the argument that since preferences are exogenous in rational choice theories, they can predict outcomes more efficiently than available alternatives. In the case of environmental governance, one could conceivably construct a rationalist explanation for liberal environmentalism loosely based on material interests and preferences derived from them. Such an argument would propose that the South wants primarily to develop and to defend sovereignty, while it has a limited interest in the environment. Therefore, liberal environmentalism was the best that could be achieved given the North's desire to protect open trade and investment while at the same time appearing to do something about global environmental problems. Likewise, the North would have liked to see the South do more for the environment, but liberal environmentalism was the best they could do, given the South's interests.

The pursuit of material interests is indeed reflected to varying degrees in the Earth Summit outcomes and the norm-complex of liberal environmentalism more generally. However, the above explanation of events falls down on both empirical and theoretical grounds. Empirically, as I show in chapter two, the South's "interest" in the environment changed drastically between 1972 and 1992, so that some countries in the South, as in the North, took positions at UNCED that could be considered "activist" on both environment and development concerns, others took "ambiguous" positions, and still others were on the "defensive."<sup>17</sup> If interests provided a sufficient explanation, UNCED outcomes should have much more closely

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<sup>16</sup>Young 1994; and Haas, Keohane and Levy 1993.

<sup>17</sup>Imber 1994, 86ff uses these classifications.

resembled Stockholm's than they did. Indeed, the Stockholm outcomes did reflect competing sets of interests to a much greater degree since new ideas that linked environment and development had only limited influence. In the intervening years, however, such ideas, in various formulations, increasingly shaped interest-definition for countries in the North and South. Thus the UNCED outcomes reflected much more than a simple North-South compromise.

For example, positions changed substantially between 1972 and 1992 on arguments put forward by the South over the way in which development ought to be promoted within a framework that also considered environmental protection. The embracing of market norms by the South, the support for incorporating environmental concerns into development projects and policies, and the willingness to acknowledge the severity of global and local threats to the environment, even if the share of responsibility between North and South remained contested, all represented substantial shifts from 20 years earlier. Likewise, the North's embrace of the concept of sustainable development in the late 1980s, with its explicit linkage of environment and development -- a linkage barely conceivable prior to 1972 -- cannot be derived from material interests alone. Admittedly, the priority given to particular environmental issues still often differed in North and South. Nonetheless, the shifts in positions noted above that facilitated the acceptance of liberal environmentalism suggests that its institutionalization reflects more than the sum of material interests.

Even in regard to the type of world order the North supported, nothing inherent in the material interest of a wealthy or powerful country makes it desire an economic system characterized by open trade and investment. The Cold War period, wherein the two most powerful countries pursued vastly different conceptions of world economic order, not to mention the long periods of history where economic nationalist policies of powerful countries dominated, demonstrates that material interests do not dictate particular policy preferences. Ultimately, even the quest to protect sovereignty on the part of the South cannot be considered solely a material interest since it is conditioned on a pre-existing set of social arrangements within the international system that privileges the role of sovereign states.

This leads to the theoretical and methodological limitations of a rational-interest approach. If one truly did not assume any preferences, they would have to be constantly re-evaluated at any given time. One could presumably undertake such an analysis and attempt to

gauge the preferences of all relevant state actors. This might have been done on the eve of the Earth Summit, for example. Such an approach is extremely inefficient, requiring constant re-evaluations of those preferences over time, since they changed. In addition, theoretically such an approach cannot explain such changes, since preferences are necessarily exogenous to any rational choice explanation of how interests lead to outcomes. Robert Keohane, for example, recognizes this limitation of his own institutionalist theory:

In the absence of a specification of interests... institutionalist predictions about cooperation are indeterminate.

That is, institutional theory takes states' conceptions of their interests as exogenous: unexplained within the terms of the theory. Unlike naive versions of commercial or republican liberalism, institutionalist theory does not infer a utility function for states simply from the material economic interests or the alleged values common to democracy.... Nor does realism predict interest. This weakness of systemic theory, of both types, denies us a clear test of the relative predictive power.<sup>18</sup>

As a result, theories that do attempt to explain normative outcomes almost always import interests, usually taking them for granted.<sup>19</sup>

Liberal environmentalism could not have been predicted in 1972 based on material interests, nor even in 1992 without the inclusion of a theory about why a reconceptualization of interests occurred. Chapter four, as I explain below, puts forward a more efficient theory than a pure rational-interest approach because it endogenizes the evolving normative context of state practices rather than relying on either the repeated evaluation of particular state preferences or the uncritical importation of assumed interests.

Theories that do attempt to link power and interests to norms still encounter the theoretical pitfalls of standard rational-interest approaches. They have also performed poorly as explanations of environmental governance in studies to date and the evidence in subsequent chapters lends little support for such an approach here. The most prominent example is Hegemonic Stability Theory, which some realist scholars developed in the 1980s. For a while it dominated thinking on how new norms arise in international politics. For example, Robert Gilpin, Robert Keohane and Stephen Krasner -- despite the differences in their work in other

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<sup>18</sup>Keohane 1993, 285.

<sup>19</sup>Ruggie 1983, 198.



respects -- all implicitly or explicitly supported the view that a dominant or "hegemonic" state that is able and willing to play a leadership role, is necessary (though perhaps not sufficient) for the establishment of international regimes.<sup>20</sup> The normative basis of those regimes, they argue, would thus reflect the interest of the hegemonic state, or, in some modified versions, a group of dominant states.<sup>21</sup> A more radical argument on the same theme focuses not on state power *per se*, but on ideational hegemony within particular world orders. This Gramscian approach argues that both the dominant state's interest and the international order rest on the ideational hegemony of a dominant class privileged by the current global mode and relations of production. Although I am greatly simplifying a varied literature, the central argument of Gramscian and historical materialist approaches is that the international order serves the interest of the class privileged by the international division of labour which reflects, in the modern world, the current stage of capitalist development and economic relations.<sup>22</sup> International organizations and regimes thus reflect such class interests, and give legitimacy to these interests.

The realist, state-centric view of hegemonic stability theory has proven of limited usefulness in explaining either international environmental cooperation or normative development. Oran Young, for example, has shown in a series of articles that hegemonic leadership was not necessary for the formation of many multilateral environmental agreements and sometimes played only a minor role, even when it participated in the regime or agreement eventually.<sup>23</sup> Even if one considers the United States a hegemon in the environmental issue area (a dubious proposition in any case) the experience of the Stockholm and Rio conferences seem at odds with the basic hypothesis of hegemonic stability theory.<sup>24</sup> At Stockholm, the United States

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<sup>20</sup>Gilpin 1987; Keohane 1984; and Krasner 1985. Note, Keohane argues that a hegemon is not necessary for regime formation, but introduces no other theory of regime formation in his major theoretical statement on neoliberal institutionalism.

<sup>21</sup>For example, Snidal 1985.

<sup>22</sup>Gill 1993; and Cox 1983, 1987.

<sup>23</sup>Young 1989, 1994.

<sup>24</sup>The debate about U.S. hegemony, whether it is declining, and whether power is fungible across issue areas versus whether hegemony can be issue-specific, is voluminous. See Young, 1989, 1994; and Paterson 1996, 91-113 for discussions about hegemony as they relate to major environmental issues. For the limited purposes here, I simply assume that the United States is the only possible candidate for hegemony, but admit scepticism as to whether one can even reasonably speak of hegemony in relation to international environmental politics.

did play a leadership role, although the agreements reached did not reflect U.S. interests solely, especially since it showed very little interest in the development side of the agenda. At Rio, the United States was a disinterested player for much of the negotiations, while the European Union assumed a much more assertive leadership role.<sup>25</sup> However, in both cases, the basic framing of issues and interest-definition came as much from the entrepreneurial leadership of the conference secretariat as from particular states, and drew from ideas and institutional developments not directly derived from dominant state interests.

Granted, dominant states may be able to block agreement on or effectively veto international norms, since they may provide the resources needed to implement the norm or their practices may be a vital part of those that the norm targets. For example, the norm of additionality – that aid transfers for environmental matters from North to South ought to be new and in addition to existing transfers – probably owes its lack of successful institutionalization to consistent opposition by the United States.<sup>26</sup> Nonetheless, little evidence supports the position that given interests of dominant states determine what norms *will* actually arise. One would be hard pressed to make the argument, for example, that norms of environmental protection can be derived from the structural power position of major states (which requires a dubious theoretical strategy in any case as noted above). The role of interests then cannot be easily derived from a material structural theory of international politics. Ideas must intervene from some source in order to create, modify, or, at the least, to find a focal point around which existing interests might converge and consensus might form. As chapter two demonstrates, the pursuit of interests by states and groups of states in particular negotiations occurred within a broader normative context that shaped those interests, even those of dominant states. The question of where an interest in environmental protection came from, for example, simply cannot be answered in terms of this framework.

Historical materialist or Gramscian approaches run into similar problems in that they say little directly about an issue area such as the environment, interest in which cannot be derived strictly from structural factors. Such approaches do open up critical appraisals of prevailing

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<sup>25</sup>Hajost 1994; and Sjöstedt et al. 1994.

<sup>26</sup>Jordan 1994a. The debate around additionality is discussed in detail in chapter two.

practices by shifting the focus from multilateral cooperation to the underlying structural conditions which give rise to environmental degradation. They can also reveal contradictions in environmental policies and the underlying patterns of capitalist production that may (or may not) contribute to environmentally destructive patterns of development. These radical critiques, however, while revealing of evidence obscured by rational-interest approaches, offer more in terms of description than explanation. How the international political economy develops dynamically in response to environmental problems remains unexplained.<sup>27</sup> Radical approaches are weakest in explaining the processes through which responses to such problems are shaped or why the environment has become a mainstream issue in international politics at all. A Gramscian analysis is revealing of some of the patterns of governance identified in chapter two, but the overly general specification of forces of capitalist production behind a liberal economic order does not help one understand how environmental governance has evolved.

Empirically, the resistance to liberal environmentalism by segments of industry, for example, suggest that ideas played an independent role from the structural dictates of capital (or else globally-minded capitalists did not act in their class interest). Those who suggest that business played a privileged role in the support of what I call liberal environmentalism point to the close relationship between UNCED Secretary-General Maurice Strong and Stephan Schmidheiny, who founded the Business Council for Sustainable Development (BCSD) with Strong's "encouragement and support."<sup>28</sup> Strong appointed Schmidheiny as one of his top advisors and gave funding to BCSD in the lead-up to Rio.<sup>29</sup> The group had representation from a number of the largest multinational corporations in the world and its popular report, Changing Course, articulated a version of environmentalism that meshed closely with many of the Rio outcomes.<sup>30</sup> However, the ideas contained in Changing Course were already well established in

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<sup>27</sup>Williams 1996, 51-52.

<sup>28</sup>Maurice Strong, author's interview.

<sup>29</sup>Strong describes how the relationship came about as follows: "Schmidheiny... was a leading businessman who himself had a very strong commitment to the concept of sustainable development. I met him in the early period of my role as secretary-general at UNCED. I liked him and I challenged him to take time off from his business and become my senior business advisor. He thought about it. I went home for a weekend with him and his family – he agreed to do it and he did even more than he agreed to do. It proved to be a very fortuitous choice." Author's interview.

<sup>30</sup>Schmidheiny 1992.

organizations such as the OECD and EU. While the privileged access given to business, or at least Schmidheiny's group and perhaps the International Chamber of Commerce, is beyond doubt, industry as a group cannot be credited with formulating ideas around sustainable development nor with being overly significant players in its institutionalization, although BCSD's support surely helped the profile of UNCED in the international business community.

As subsequent chapters demonstrate, industry consistently came late and often fought the compromises that eventually evolved into liberal environmentalism. A key example is the resistance of a major industry lobby to findings of an OECD conference in 1984 on Environment and Economics.<sup>31</sup> As chapter four will show, this conference articulated many of the core ideas that would later inform the Brundtland Commission report. Among the varied non-governmental groups and members of governments involved<sup>32</sup>, only the Business and Industry Advisory Committee to the OECD issued a separate statement that qualified the findings of the conference.<sup>33</sup> The group showed resistance to the idea that the economy and environment can be mutually reinforcing, a key finding of the conference and the Brundtland Commission. Instead, it argued, "there should be a balance between environment policy and economic policy," indicating that it viewed the balance of environmental and economic policies as a zero-sum game. Furthermore, industry has tended to be reactive rather than proactive, and in general has shown resistance to environmental policies when they threaten particular interests of individual industries or sectors. This approach outweighs the limited attempts on the part of industry to fit policies into an overall structure supportive of liberal norms.

In addition, little unity can be discerned among industry groups on shaping environmental norms in the main period under investigation. Rather, industries tend to address specific issues based on how policies directly affect their profits. For example, in negotiations on a climate change convention, oil producers -- who formed their own non-governmental organizations such as the Global Climate Coalition (GCC) -- actively lobbied to prevent any regulation or action that might limit oil consumption. Meanwhile, renewable energy providers, through the World

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<sup>31</sup>OECD 1985.

<sup>32</sup>Politicians and bureaucrats who attended did so in an individual capacity, not as representatives of their states.

<sup>33</sup>OECD 1985, 243-247.

Sustainable Energy Coalition, emerged as supporters of greenhouse gas emission reductions. Similarly, a new alliance has arisen since UNCED between the environmental group Greenpeace and the insurance industry, which feels vulnerable to catastrophic weather events that may come with global warming.<sup>34</sup> Finally, observers and analysts of environmental policies have noted that while corporate head offices have endorsed cost-effective, market-oriented approaches to environmental protection for some time, industry lobbyists are showing “a curious resistance.”<sup>35</sup> Hahn and Stavins, for example, note this trend in a study of the switch from command-and-control to market-based policies. Specific businesses or industries may resist, they argue, because although market-based policies may provide a given level of environmental protection at minimum cost for society as a whole, they often involve substantial transfers between sectors. Thus the changes I identify toward liberal environmentalism appear to have pulled industry along, rather than vice versa.

To achieve a more direct focus on the content, or ideational basis, of environmental governance structures, some authors have turned to discourse-theoretical approaches. For example, Maarten Hajer has used discourse analysis to examine how the discursive practices around “ecological modernization” – the notion that environmental problems can be solved in accordance with the workings of the main institutional arrangements of society – influenced the regulation of environmental conflict around acid rain policy in the United Kingdom and the Netherlands.<sup>36</sup> Similarly, Karen Litfin shows how the framing and interpretation of scientific knowledge shaped international responses to ozone depletion.<sup>37</sup> A discourse approach performs best as a way to understand social context and meaning that constrain and enable certain policy choices and regulate social conflict. It can generate revealing descriptions that identify changing discourses and how such changes might influence the legitimacy of particular policy choices.

Discourse analysis performs less well in specifying actual practices or institutional arrangements that prevail. Discourse is significant when it becomes institutionalized, as

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<sup>34</sup>Paterson 1996, 164-167; and Rogers 1993, 244-245.

<sup>35</sup>Hahn and Stavins 1991, 25.

<sup>36</sup>Hajer 1995.

<sup>37</sup>Litfin 1995.

competing discourses are constantly present. But discourse analysis alone occurs almost exclusively in the realm of language and meaning, thus is weak in its analysis of political processes that make some discourses heard over others. This method of analysis also makes it difficult to separate the sources of discourse from its effects and runs into the danger of presenting discourses as if they float freely,<sup>38</sup> to be snared by actors in a fashion left unexplained within such approaches.<sup>39</sup> The attempt here is to ground discussion in how, when, and why ideas became institutionalized. It bypasses theoretical discussions of the role of discourse and instead focuses on agreed to norms and principles and where they originated. The nature of norms as based in intersubjective meanings suggests any norm-based analysis, including this one, shows an affinity to what social theorists refer to as discourse. However, this study attempts to ground its analysis more in practice and institutionalization as these have identifiable empirical referents. The focus below on the movement of ideas to norms accomplishes this task.

### *From Ideas to Institutionalized Norms*

Chapters three and four test in some detail two approaches that focus on how ideas associated with liberal environmentalism became institutionalized. These approaches respond more directly than those just reviewed to the two questions posed at the start of the section -- who carried ideas associated with liberal environmentalism and why did they become institutionalized?

Chapter three tests an "epistemic communities" explanation that new norms arose in response to consensus within a "scientific ecology" epistemic community of experts empowered by their causal and principled beliefs.<sup>40</sup> This explanation has been used primarily to show how consensual knowledge within such groups aids international policy coordination by redefining state interests to facilitate rational cooperation. However, I am drawn to it here more for its underlying assertions about how and why a particular set of ideas (that is, those associated with

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<sup>38</sup>Risse-Kappen 1994 makes a similar point.

<sup>39</sup>Hajer 1995 presents an "argumentative" approach that attempts to correct this problem by focusing on how language affects identities and interests of coalitions of actors by creating "discourse coalitions" around particular story lines, as opposed to interests. However, his focus remains primarily on language and less on how and why ecological modernization became institutionalized in the first place.

<sup>40</sup>Haas 1989, 1990, 1992a, 1992b, 1996; and P. Haas and E. Haas 1995.

an expert group of ecological scientists) comes to dominate the cooperative outcomes it explains. An epistemic communities approach thus offers clear answers to questions of both who carried ideas (scientists) and why those ideas had causal weight (legitimacy of their knowledge claims). Despite recent critiques, the epistemic communities literature still provides the clearest explanatory framework available of how scientific knowledge translates into changed patterns of state behaviour and international interactions.<sup>41</sup> It has also been influential in scholarly work on the role of ideas in international relations more broadly.<sup>42</sup> Furthermore, it often serves as a point of departure for studies on international environmental action since the complex and uncertain nature of environmental problems appears to privilege experts in determining the nature of environmental problems and the technical requirements needed to address them. These factors combine to make environmental governance a crucial test for the approach in that it should perform best in issue areas characterized by uncertainty and technical complexity.

Chapter three explains the approach in detail and undertakes a thorough analysis of the influence of scientists and scientific ideas on the evolution of environmental governance. In this way, it not only tests an epistemic communities hypothesis, but offers more general insights into how science and politics have in fact interacted in the shaping of environmental governance.

Ultimately, I find that an epistemic communities approach falls short on a number of grounds. For example, consensus on both cause-effect knowledge and values within the relevant epistemic community was weaker than often portrayed. Furthermore, core ideas of environmental governance did not originate from this group. Indeed, the historical evidence suggests that the causal arrow often runs in the opposite direction, with ideas around liberal environmentalism increasingly influencing global environmental research.

Chapter four introduces an alternative explanation that focuses on the causal role of economic ideas, but not simply as embodied in an epistemic community of economists. Instead, a socio-evolutionary explanation is put forward that draws from recent work on the evolution of norms in international politics.<sup>43</sup> This explanation argues that to understand how new norms

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<sup>41</sup>Susskind 1994; and Yee 1996.

<sup>42</sup>Goldstein and Keohane 1993b, 11 fn. 18; Yee 1996; and Litfin 1994.

<sup>43</sup>Especially Florini 1996. The term evolution has a long lineage of use and abuse in both the natural and social sciences, the latter being particularly fraught with ideological manipulation. Therefore, I want to distance myself

become institutionalized requires sensitivity to the international social structure they encounter, a step missed in actor-focused studies of epistemic communities.<sup>44</sup> It also offers an alternative to strictly rational-interest approaches to the role of ideas that see ideas simply as forming focal points for agreements among actors with given interests.<sup>45</sup> The focus on social structure recognizes the intersubjective quality of ideas and discourse, but attempts to ground such analysis in actual historical processes through which some ideas are selected over others. The focus on social structure provides an efficient solution to the problem of importing interests inherent in rational choice approaches, in that social structure sets the context in which actor interests are pursued and defined. Identifying social structure at least partially endogenizes state interests as opposed to rational choice theory which, in its pure form, requires the identification of the myriad of state (or other major actors) interests at any given time in order to predict outcomes.

I argue that three factors determine the success of new ideas and the norms they support: legitimacy of the source of new norms and ideas, fitness with existing international social structure, and the degree to which key actors identify their social interests with those ideas. Chapter four goes over the socio-evolutionary approach and concepts used in detail. The approach reveals the importance of particular sets of economic ideas, but attempts to push the current ideas literature further by emphasizing the interaction of new ideas with an existing social structure.

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from the teleological or value-laden use of such theories characteristic of early Social Darwinism. Such approaches posit that social evolution is moving toward a progressive goal, usually western ideals of civilization or social organization. Florini (1996, 370) correctly identifies this common problem:

Such applications were based on a fundamental misunderstanding, if not a deliberate misuse, of the basic idea of evolution through natural selection – that “fitness” is a purely contingent phenomenon.

If some individuals or groups prosper while others falter, this means nothing about their relative virtue. It means only that the former happened to have a combination of attributes, resources, and/or luck that better met the environmental demands of the moment than did the latter.

I chose the word evolution because I borrow the concept of “fitness” directly from Darwin’s formulation and am attracted to the notion of evolutionary change as a useful analogy for the historical processes my socio-evolutionary approach identifies. However, I must emphasize that the borrowing of concepts should not imply an endorsement of any particular variant of evolutionary theory nor do I claim that the socio-evolutionary approach as a whole can be derived from evolutionary theory as studied by biologists or geneticists. Instead, the socio-evolutionary approach draws from a variety of sources based in evolutionary theory and international relations scholarship. For deeper discussions of how evolutionary theory can contribute to the study of international politics see the special edition of *International Studies Quarterly* (1996) on this topic.

<sup>44</sup>Social structure refers to the institutional manifestation of ideas and values, expressed in norms and rules. Chapter four presents a fuller discussion.

<sup>45</sup>Goldstein and Keohane 1993a.



### *Metatheoretical Issues*

The socio-evolutionary approach and the focus on norms more generally raise a number of metatheoretical issues that I want to address at the outset. First I will situate the two approaches in chapters three and four within an emerging debate on the causal role of ideas in international relations. Second, I will discuss the epistemological issues of explanation and causality since these terms may be a source of confusion, particularly with the socio-evolutionary approach.

The relatively recent attention to the role of ideas in international politics has already produced a split between those who wish to treat ideas as an intervening variable between interests and behavioural outcomes and those who take an interpretivist approach that focuses on the persuasive power of ideas or their embodiment in discourses. The former approach has the advantage of easily fitting into a positivist epistemology where outcomes can be clearly coded and the conditions for those outcomes to occur may be identified in a testable way. Goldstein and Keohane, for example, promote this use of ideas as a welcome addition to the neoinstitutional literature in international relations.<sup>46</sup> Ideas, in their view, inform the preferences actors bring with them to strategic interactions, they provide focal points for cooperation when obvious equilibria are absent, or they act like Max Weber's famous "switchmen", directing future policies along certain paths. In all these cases, ideas are important not because of their meaning, but because they provide solutions to rational cooperation problems or because they are functional for institutional stability. Why those ideas are chosen, that is, the causal weight based in their meaning, is beyond the scope of this approach. As Goldstein and Keohane admit, their approach does "not suggest a theory for the creation of these switches, or even a fully worked-out model to explain the process by which ideas are selected."<sup>47</sup> Such a theory is not possible within their rationalist approach.<sup>48</sup>

On one level, Peter Haas's work on epistemic communities, from which the hypothesis in chapter three is drawn, fits with the view of ideas presented in the Goldstein and Keohane

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<sup>46</sup>Goldstein and Keohane 1993a.

<sup>47</sup>Goldstein and Keohane 1993b, 12.

<sup>48</sup>Similar criticisms have been raised by Woods 1995; and Yee 1996.

volume. Early studies on epistemic communities mostly posited that ideas intervened to form focal points for cooperation. The only addition was that ideas could cause learning which might alter preferences or modify interests prior to interaction so that cooperative equilibria became more apparent.

But I chose the epistemic communities hypothesis because of the ways in which it went beyond the cooperation literature: namely, the hypothesis contains within it an argument about why some ideas in particular mattered, that is, ideas that had legitimacy rooted in an expert group privileged by its cause-effect knowledge and driven by principled beliefs based on such knowledge claims. Thus, it appeared to answer the two questions left unanswered by rationalist approaches: where did ideas come from and why did they get selected? As mentioned, however, chapter three shows the limited usefulness of this approach in explaining environmental governance.

In response to these limitations, I develop the socio-evolutionary approach in chapter four as an attempt to move the discussion away from a focus on an expert group alone, and toward the interaction of ideas with their environment. In the formation of international norms, that environment is the existing set of norms that make up the international social structure. Because international social structure is constantly evolving in response to the institutionalization of new norms and altering of old ones, the socio-evolutionary approach lends itself naturally to an historical and interpretivist methodology. The content, in terms of meaning, of social structure must be investigated at any given time as the environment in which new ideas compete. The approach is limited in its ability to model strict causal relationships because the fitness of ideas associated with liberal environmentalism is historically contingent.

This leads to the second set of metatheoretical issues, that is, what kind of explanation does a socio-evolutionary approach entail? I argue that it does identify a kind of causality that makes it something more than a purely interpretivist endeavour. It identifies factors that make some ideas more likely candidates for institutionalization or legitimation than others. Even though these factors, such as fitness with social structure or legitimate ideas, are based in understandings of meaning, they can still possess causal weight.

Without pre-empting the detailed discussion of the approach in chapter four, metatheoretical issues of causality can be addressed by contrasting the notion of causality

employed with a strict positivism. A positivist epistemology, with its roots in Humean empiricism, makes no claim about actual forces of causation. Rather, it seeks to identify regular and predictable series of events that occur whenever the same conditions hold.<sup>49</sup> Causation, in this view, exists outside of time and space. The positivist method is to propose a generalization about some phenomenon, deduce a testable hypothesis from it, and observe whether the prediction succeeds. Positivist theory is predictive to the degree that one gains confidence, through testing (of falsifiable hypotheses) and modifying of theories (generalizations), that one has identified necessary and sufficient conditions, which can then be inferred to cause the outcome in question.<sup>50</sup>

However, the social world, including international politics, does exist in time and space, and thus is indeterminate. John Ruggie, beginning with this observation, has recently contrasted the Humean notion of causality above with what he calls “narrative” causality. This notion of causality “conforms to its ordinary-language meaning: whatever antecedent conditions, events, or actions are significant in producing or influencing an effect, result, or consequence.”<sup>51</sup> This difference is important for studying intentionalistic human beings in history, where generalizable mechanical laws do not always apply. The social world consists of reasoned and intentioned action, the causes of which can be found as much in ideas, norms, and institutions as in the physicalist universe of “distinct actors, with palpable properties, engaged in discrete events.”<sup>52</sup> I have already addressed the limitations of international relations theories that focus solely on power and interest -- which can most easily be modelled in the physicalist universe of positivist epistemology. Such theories can tell us much about the form of international relations (whether cooperative outcomes are more or less likely, for example) but little about the content. A focus on content means turning to “social facts” of intention and meaning.

“Social facts” can be considered causes not in a simple mechanical way via external constraint, but internally or cognitively by defining and re-defining the identities and interests of

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<sup>49</sup>Hollis and Smith 1990, 49.

<sup>50</sup>Hollis and Smith 1990, 50-55.

<sup>51</sup>Ruggie, 1995, 95. See also Cox 1986.

<sup>52</sup>Ruggie 1995, 96.

actors. Constructivist international relations theory has made much of this constitutive aspect of international norms and institutions as opposed to the strict focus on only specialized regulative and enforcement rules that characterizes rational-interest approaches to norms and ideas.<sup>53</sup>

Norms possess causal power because they provide the intersubjective context in which practices are understood as meaningful. They condition the possibilities of action by defining the range of meaningful if not of conceivable behaviour, and by pre/proscribing the types of appropriate or legitimate behaviour that can be performed in particular social contexts. The institutionalization of norms increases the likelihood of the behaviour they prescribe and decreases the likelihood of the behaviour they proscribe. While this may not guarantee that all behaviour will conform to the norm, it shifts the burden of effort and proof onto those actors who contest its validity, and empowers actors in conformity with the norm. Following such reasoning, Yee argues that norms “quasi-causally affect certain actions not by directly or inevitably determining them but rather by rendering these actions plausible or implausible, acceptable or unacceptable, conceivable or inconceivable, respectable or disreputable, etc.”<sup>54</sup> Unless one is confident that knowledge about international politics can be derived solely from the brute facts of power politics, a position I have already shown to be inadequate, then one must be open to a notion of causality that recognizes the causal power of human intentions and reasons (ideas) and the norms and institutions (social structure) that provide the intersubjective context of human action.

Following on these metatheoretical positions, the socio-evolutionary approach is explanatory because it not only identifies social structures and posits their causal weight, it also emphasizes that specific factors can be identified that reveal processes through which intersubjective meanings evolve. In addition, I identify the general contours of social structure that provides the environment with which new ideas interact, a step glossed over in the often general formulations of recent theoretical work in this vein.

Finally, the question of prediction arises whenever one makes causal claims. If some force, social fact, or material condition possesses causal weight, its presence or absence would be a basis on which to expect certain outcomes. The difficulty again comes with equating narrative

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<sup>53</sup>For example, Wendt 1987, 1994; Dessler 1989; Kratochwil 1989; and Katzenstein 1996.

<sup>54</sup>Yee 1996, 97.

causality with the more mechanistic, formal causality. The latter implies a precision in predicting outcomes given the presence or absence of particular causes. The former recognizes the indeterminacy of human action, and the contingent nature of the conditions it views as causes. Liberal environmentalism is not a dependent variable that can be measured along a quantifiable axis. Rather, it is an intersubjective understanding of international environmental governance that exists within a particular historical context. The causes are thus also historically specific, and their significance can only be determined through careful historical analysis of the ideas that lead to those understandings and the processes through which those ideas were selected. Counterfactuals might be one useful methodological tool to evaluate the causal role of ideas or of the norms they informed. One might ask, for example, what would have happened in the absence of ideas associated with liberal environmentalism? In addition, the success of some ideas can be compared to the failure of others to look for clues as to the selection mechanisms at work.

The socio-evolutionary approach in chapter four does identify a selection process that makes it more likely that some ideas will be selected over others in becoming institutionalized, and in that sense it is predictive. However, given the historical nature of causal processes identified, it is not predictive in the sense of specifying generalizable antecedent conditions for particular outcomes. In the socio-evolutionary approach, the selection of ideas hinges on some degree of fitness with social structure. However, social structure is constantly changing in response to new ideas that gain legitimacy. This historical process through which certain ideas get selected is explained in detail in chapter four.

### **Outline of the Study**

In order to understand the content of international environmental governance and then explain its evolution, I begin in chapter two with a detailed historical account of the norms invoked to guide state and other major actor responses to international environmental problems. I trace the evolution of international environmental norms from the 1972 Stockholm conference which marked the first major political attempt to formulate a general set of governing norms to address the world's environmental problems. It also started a process that led to various attempts to link environment and development norms, and eventually to the compromise of liberal environmentalism.

Chapters three and four offer two competing explanations for why the ideas associated with liberal environmentalism became institutionalized. Chapter three tests an epistemic communities hypothesis in this crucial case for the approach. It also examines the ways in which scientists did actually influence environmental governance, and finds that their work in turn was also shaped by the normative structure in which they participated. In response to the limitations of an epistemic communities explanation, chapter four introduces a socio-evolutionary approach that attempts to capture the dynamic process of how new ideas interact with the existing international social structure to legitimate the norm-complexes that lie at the heart of international governance. In this case, the approach highlights how a group of policy entrepreneurs, drawing primarily on a set of economic ideas, were able to successfully reframe norms of international environmental governance to fit better with the broader international social structure than had previous attempts. The resulting compromise of liberal environmentalism made possible increased international efforts to address environmental problems and shaped how responses would be framed.

The concluding chapter discusses some of the implications of my findings for both international relations theory and for international environmental policies. It assesses the strengths and weaknesses of the socio-evolutionary approach to understanding the historical development of international environmental governance. It also discusses the ways in which the legitimation of liberal environmentalism opens up and closes off various courses of action on global environmental problems. It suggests that certain kinds of knowledge and policy responses are privileged not because of their inherent truth or even effectiveness, but because the institutionalization of liberal environmentalism grants them legitimacy. Knowing the origins of these norms and the processes through which they become institutionalized contributes to opening up such critical questions, rather than taking the progress of international environmental cooperation for granted.

## Chapter Two

### The Evolution of International Environmental Norms

The normative evolution toward liberal environmentalism began in 1972 at Stockholm at the United Nations Conference on the Human Environment. There, the concerns of conservationists and environmental scientists (primarily from the North) encountered resistance from states more concerned with economic growth and poverty reduction. From this confrontation, new thinking developed that attempted to link environment and development into a single framework under the rubric of “sustainable development.” The 1987 Brundtland report marked the first real synthesis of these two agendas and reflected a Keynesian-like compromise. In it, liberal interdependence that generated growth would be tempered by managed interventions to cushion and facilitate adjustment in the South and direct development on a path less likely to harm the environment. By 1992, a shift in norms of environmental governance had occurred, characterized by a general acceptance of liberalization in trade and finance as consistent with, and even necessary for, international environmental protection. These norms also promoted market and other economic mechanisms (tradeable pollution permits,<sup>1</sup> privatization of the commons, and so on) over command and control methods (standards, bans, and quotas) as the preferred method of environmental management. The concept of sustainable development legitimated and masked this compromise at the heart of international environmental governance.

In this chapter I trace through this evolution of international environmental norms. Since I argue that the language of “sustainable development” obfuscates underlying trends in environmental governance, I identify the international political and economic norms invoked in its name rather than focus on its elusive meaning.<sup>2</sup> The trace of norms begins with a relatively detailed account of the Stockholm conference, since the origins of the compromise of liberal environmentalism can be found there. Studies that focus on the language of “sustainable

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<sup>1</sup>Economists tend to favour tradeable pollution permit schemes over other market approaches to pollution control. Such an approach involves the creation of a market where agents can buy and sell “rights” for actual or potential pollution. Under emission trading, “dischargers operate under some multi-source emission limit and trade is allowed in permits adding up to that limit.” OECD 1994a, 20. Other economic instruments might include charges or taxes.

<sup>2</sup>Caldwell 1990, 207; Brooks 1992, 401-408; and Pearce et al. 1989, 173-185. For a recent discussion see Moffatt 1996.

development” often begin with the World Conservation Strategy, the first major international effort at environmental protection that used the concept extensively. However, to understand the normative compromise that underlies that concept, one must go back to Stockholm to examine the ways in which environment and development became linked.

The focus on norms also requires careful attention to the development of international environmental law, including the “soft” declaratory law that often serves as a base on which environmental governance is built.<sup>3</sup> I will therefore also make reference to various multilateral treaties and declarations, and to activities of multilateral agencies, such as the United Nations Environment Programme (UNEP) and the World Bank, to trace the development of norms and their interpretation in practice. The focus on international institutions is important since norms may also be inferred from state practices and institutional practices of major organizations involved in environmental governance.

The chapter is organized around the three major defining events in international environmental governance mentioned in the introduction: the 1972 United Nations Conference on the Human Environment (UNCHE) in Stockholm; the 1987 World Commission on Environment and Development (WCED) report Our Common Future (also known as the Brundtland Commission report); and the 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro. I discuss the politics of and outcomes of the three major events and the development of ideas on environmental governance that occurred in the intervening periods. Lists of international norms follow the sections on the Stockholm conference, Brundtland Commission report and UNCED. The lists illustrate the evolution from a primary focus on environmental protection to the current norm-complex of liberal environmentalism.

#### **United Nations Conference on the Human Environment (UNCHE)<sup>4</sup>**

The Stockholm conference’s significance lies in its articulation of a nascent set of norms that would become the basis for international environmental law and practice.<sup>5</sup> Earlier

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<sup>3</sup>Chinkin 1989; and Dupuy 1991.

<sup>4</sup>Unless otherwise noted, preparatory documents are found in U. S. Department of State 1972.

<sup>5</sup>Schachter 1991; Pallemarts 1994.



conferences and activities of regional organizations possibly did as much to promote specific actions to protect the environment, but Stockholm began, or at least made explicit, the process of a global response to care for the Earth's ecosystems under a common framework. For example, scientists and diplomats introduced many of the concrete recommendations that came out of Stockholm at UNESCO's Biosphere Conference in 1968. However, the political dynamics of Stockholm were without precedent.<sup>6</sup> In the words of one analyst:

Stockholm was without doubt the landmark event in the growth of international environmentalism. It was the first occasion on which the political, social, and economic problems of the global environment were discussed at an intergovernmental forum with a view to actually taking corrective action.<sup>7</sup>

This interaction of science, public concern and international politics produced the first real clues as to how the international community as a whole would treat environmental concerns.

The United Nations Conference on the Human Environment was first and foremost an environmental conference. Held from 5-12 June 1972, it brought together 113 states, 19 intergovernmental agencies and about 400 NGOs in the parallel Environment Forum. The only notable absences were members of the Soviet Bloc who boycotted the conference in protest over the exclusion of East Germany.<sup>8</sup> Significant outcomes of the conference included the 26 principles of the Declaration on the Human Environment, the 109 recommendations in the Action Plan for the Human Environment, and the creation of UNEP, formally established by the United Nations General Assembly in December 1972.<sup>9</sup>

I am concerned mainly with the principles in the Declaration. These principles brought together the interests of the developed and developing world, thus highlighting the tension between environment and development. By forcing that conflict into the open, Stockholm marked a significant step in the development of the current norm-complex of liberal environmentalism. However, Stockholm did not work out the environment/development tension

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<sup>6</sup>Adams 1990, 32-36.

<sup>7</sup>McCormick 1989, 88.

<sup>8</sup>The German Democratic Republic was excluded while the Federal Republic of Germany was not because of political manoeuvring on the part of the West. Neither Germany had U.N. membership, but the FRG was a member of the International Atomic Energy Agency and a U.N. resolution in 1969 allowed its members to participate.

<sup>9</sup>United Nations 1972a.

under a unifying set of norms. Rather, the final documents simply juxtaposed the interest in environmental protection by the North with the development concerns of the South. The Declaration and Action Plan introduced macroeconomic issues related to trade and development, but never clearly specified the content of development norms it could support. I explore these norms in more detail below. First I trace the dynamics that led to the Stockholm outcome.

### *Bringing the Developing World In*

The Stockholm Conference was prompted mainly by concerns in industrialized countries over transnational pollution from industry and its products. Most accounts gloss over its unusual origins in the person of Swedish soil scientist and television personality Svante Odén. An advisor to the Swedish government, Odén convinced politicians and the Swedish people that lakes and rivers in Sweden were becoming acidic partly as the result of sulphur from smokestacks in other countries. Persuaded of the need for international cooperation to limit acid precipitation, Sweden proposed the conference.<sup>10</sup>

The time was also ripe for such an international gathering. By the late 1960s and early 1970s, environmental movements had sprouted up in many Western industrial nations; hence UNCHE reflected increased public anxiety over the state of the environment and the supply of natural resources. Popular publications such as Rachel Carson's *Silent Spring* and the Club of Rome's *Limits to Growth* fuelled those concerns.<sup>11</sup> The former documented the effects of chemical insecticides on birds and other animal species (including humans) while the latter utilized a newly developed MIT computer-generated simulation that modelled trends of rising population and declining resource stocks. It predicted an impending resource crisis within 100 years if such trends continued. The increased sensitivity to environmental problems, combined with spectacular environmental disasters such as the 1967 *Torrey Canyon* oil spill off the coast of Cornwall in Great Britain, contributed to the perception that environmental problems were severe, on the rise, and in need of a global response.

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<sup>10</sup>Munn 1992 and R.E. Munn, author's interview. In chapter three I further discuss Odén's role in developing the science that led to international responses to acid rain.

<sup>11</sup>Carson 1962; and Meadows et al. 1972.

Not surprisingly, then, when in 1968 the United Nations proposed a global conference on the environment, the concerns of industrial pollution and the perceived need to conserve natural and biological resources initially dominated the agenda. Governments believed that such problems of industrialization required international cooperation and regulation. Thus the initial United Nations resolution in December 1968 that called for the conference began by noting “that the relationship between man and his environment is undergoing profound changes in the wake of modern scientific and technological developments.” The resolution identified physical effects of pollution and their immediate causes, but tended to see such problems in isolation from socio-economic structures. Environmental concerns covered only “the continuing and accelerated impairment of the quality of the human environment caused by such factors as air and water pollution, erosion and other forms of soil deterioration, waste, noise and secondary effects of biocides, which are accentuated by rapidly increasing population and accelerating urbanization.”<sup>12</sup>

Developing countries expressed concern over the narrow environmental focus. They successfully used the United Nations multilateral setting to demand the inclusion of development issues. In particular, many developing states feared an emphasis on lifeboat ethics or no-growth philosophy implied in studies such as Limits to Growth.<sup>13</sup> Some states also voiced concerns that high profile pollution and disasters would overshadow links between environment, culture, and economics. In particular, developing countries worried that trade barriers would be erected under the guise of environmental protection. For example, food exporters who relied on chemical pesticides worried they would lose markets in the developed world if tough regulations were imposed. If developing countries were to participate – which was crucial to the success of the conference – these concerns could not be ignored.

The change from 1968-1972 in United Nations Economic and Social Council (ECOSOC) and General Assembly (UNGA) resolutions demonstrated the progressive movement of developing world concerns to the mainstream, if not the centre, of Stockholm’s agenda. Initially, resolutions marginalized developing countries. They treated developing countries concerns as an

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<sup>12</sup>UNGA Res. 2398 (XXIII) A/L.533 3 December 1968 in YUN 1968, 477.

<sup>13</sup>For example, see de Almeida 1972, 37-56. See also Founex Report 1972, 12-13, 27.

afterthought, merely expressing a general conviction that attention to the human environment is “essential for economic and social development.” Developing countries used resolutions in subsequent years to shift the position of development on the agenda. For example, a 1969 resolution for the first time placed the concerns of developing countries within the main purpose of the conference. UNGA resolution 2581 (XXIV) “affirms” that the primary purpose of the conference remained “to serve as a practical means to encourage, and to provide guidelines for, action by governments and international organizations designed to protect and improve the environment... bearing in mind the particular importance of enabling developing countries to forestall the occurrence of such problems.”<sup>14</sup>

In response to the report of the first session of the conference’s Preparatory Committee (PrepCom) in New York (10-20 March 1970), resolutions went further in an attempt to balance environmental problems of developed and developing countries. In particular, ECOSOC resolution 1536 (XLIX) stressed the need to take into account “such environmental problems as are particularly acute in developing countries and relevant to their needs.” More significantly, in terms of articulating a particular set of norms, the same resolution, “*Earnestly hopes* [that the conference]... will promote, in particular, the aims of the Second United Nations Development Decade by contributing to sound economic and social development.”<sup>15</sup> However, the General Assembly, which had up to then used ECOSOC language in its own resolution (2657 (XXV)) on the conference, simply took note of the ECOSOC resolution. A North/South split was apparent.

By 1971 the split was in the open. That year marked a significant shift in how the United Nations would treat global environmental concerns: they no longer could be discussed in isolation from development. The General Assembly resolutions for the first time directly linked the two concepts, stating that “development plans should be compatible with a sound ecology and that adequate environmental conditions can best be ensured by the promotion of development, both at the national and international level.”<sup>16</sup> Other relevant language in the resolution reflected political and development goals of the Group of 77 developing nations (G-

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<sup>14</sup>YUN 1970, 393.

<sup>15</sup>YUN 1970, 451.

<sup>16</sup>UNGA Res. 2849 (XXVI), YUN 1971, 311-312.

77). In response, the United States and Great Britain voted against the resolution and all other developed countries, East and West, abstained. However, it still easily reached the necessary 2/3 majority for passage.

Developing countries used the resolution to forcefully argue two points: first, that “pollution of world-wide impact is being caused primarily by some highly developed countries... therefore, the main responsibility for the financing of corrective measures falls upon those countries;” second, that most environmental problems in developing countries resulted from under-development itself. In addition, among the provisions, developing countries stressed that states must respect sovereignty over resources and internal economic planning, that environmental provisions must not impede development, and that measures must avoid any adverse consequences for trade, technology transfer or development assistance. In particular, the resolution asked for additional financial and technical resources “beyond the resources already contemplated in the International Development Strategy.”<sup>17</sup> The resolution also listed a number of specific requests that later appeared in modified form in the Stockholm Declaration. The unmistakable underlying theme was that developing countries wanted assurances that environmental concerns would in no way impede their development goals.

Despite the impression of unanimity among developing countries in United Nations resolutions, not all developing countries found common cause on every issue. For example, the People’s Republic of China (a latecomer to the conference process) took a strong stand against United States’ involvement in Vietnam while other developing countries took positions against China’s and France’s nuclear testing programs. However, on the core environmental and economic positions, the developing world acted largely as a bloc in an attempt to maximize its political power. It took advantage of Northern concerns that, in the future, the South could be the locale of the world’s worst environmental problems. Not surprisingly, leadership in the South fell to countries such as India and Brazil (and later China) that traditionally filled that role. However, their importance to the global environment gave them added bargaining power. For

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<sup>17</sup>The request that financial commitments from the developed world be in addition to existing development monies – often termed “additionality” – is perhaps the one issue continually requested by developing countries that is consistently rejected by some developed countries, particularly the United States (although some inroads occurred at UNCED). It is for this reason that additionality does not appear in the list of norms below. See Jordan 1994a.

example, India's large population and Brazil's sovereign control over huge rain forests gave those countries both power and an interest in the outcome of Stockholm.

The position of developing countries did not arise in isolation from more general development goals that had taken shape during the 1960s in fora such as the United Nations Conference on Trade and Development (UNCTAD) and G-77 meetings. These organizations had begun to push for various reforms in international institutions and to the international management of production, trade, and finance (with an emphasis on aid). The proposed reforms eventually coalesced in the early 1970s in demands for a New International Economic Order (NIEO). The demands included sovereignty over resources (and a general entrenchment of the norm of sovereignty and territorial integrity), increased aid flows from North to South, commodity price stability, increased participation and voting power in international economic institutions, and restructuring of trade to allow greater access to Northern markets and exceptions to the norm of reciprocity.<sup>18</sup>

Following in this context, two key meetings in the lead-up to Stockholm articulated an emerging developing country position on environmental problems: the November 1971 Second Ministerial Meeting of the G-77 in Lima, Peru; and the meeting of the Panel of Experts on Development and Environment in Founex, Switzerland on 4-12 June. Significantly, Founex came three months before the third PrepCom for Stockholm where the inter-governmental working group presented the first draft of the Declaration on the Human Environment. Since Founex had a more direct relationship to UNCHE, I will discuss it in more detail following a brief discussion of the Lima meeting.

The G-77 ministers' meeting is more interesting for what it did not say about the environment than what it did. Despite the flurry of United Nations activity around the issue, the environment only merited one small item on a lengthy agenda dominated by trade and financial matters. Hence, the final report contained only a brief statement on "The impact of environmental policies on trade and development."<sup>19</sup> Apart from a general acknowledgement that all mankind [sic] should be concerned about the environment, the statement focused on the

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<sup>18</sup>Numerous sources detail NIEO demands and history. For example, Rothstein 1979 and Krasner 1985.

<sup>19</sup>Group of 77 1981, v. II, 210.

negative effects of environmental policies for developing countries. It listed four concerns: environmental policies should not adversely affect development; specifically, environmental policies should not adversely affect the flow or terms of financial assistance, set new conditions on international trade nor obstruct any efforts “towards the sustained economic development of developing countries”; environmental trade barriers should be removed; and environmental policies in developed countries should facilitate development in developing countries.

As can be seen, the language of sustainable development already existed in demands of developing countries, but it lacked the same connotations promoted in the Brundtland report. Thus one must use caution in interpreting such language. For example, the economic program pushed by developing countries in the early 1970s, while growth oriented, certainly was not consistent with liberal economic regimes.<sup>20</sup> “Sustained economic development” meant simply that development must make economic growth its priority, regardless of how it would be achieved. As I will demonstrate later, the use of sustainable growth language has re-emerged in line with neoliberalism in international economic institutional arrangements. Thus the manipulation of discourse plays an important role in justifying a series of changes to the norms invoked in the name of “sustainable development” more generally.

The Founex meeting marked a more thorough attempt than Lima to articulate concerns of developing countries. UNCHE Secretary-General Maurice Strong convened the meeting of 27 experts in the fields of development and the environment in an attempt to repair the rift between the developed and developing world on the focus of Stockholm. In conjunction with four follow-up regional seminars in the developing world, Founex succeeded on at least three counts. First it allowed respected experts sympathetic to environmental issues to express concerns in an environmental forum that placed the developing world front and centre. Second, it cemented the linkage between environment and development issues, with the assertion that they could be combined to optimize sound economic and ecological systems, even if the relationship remained vague and ill-defined. Third, those experts became valuable political assets who helped convince developing world leaders to send delegations to Stockholm, and to attend themselves.

The four regional conferences, co-sponsored by the United Nations secretariat and convened by economic commissions in Addis Ababa, Bangkok, Mexico City and Beirut, also

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<sup>20</sup>Krasner 1985.

generated developing country interest. Environmental scientists and administrators from developing countries dominated the conferences. Although continued scepticism about the Northern emphasis on pollution control prevailed, the added influence these meetings provided to developing country experts allowed them to push their governments toward a moderate position in the preparations for Stockholm. They also provided momentum for the building of domestic environmental administrative capacity and concern.<sup>21</sup> These meetings and Founex prevented Stockholm from being a political failure.

Substantively, the Founex report supported the two conclusions that appeared in the 1971 resolution's language above. First, it noted that, "To a large extent, the current concern with environmental issues has merged out of the problems experienced by the industrially advanced countries." Furthermore, these problems largely resulted from a high level of economic growth with its attending negative consequences for local and global environments. While developing countries wished to avoid "mistakes and distortions" that resulted in the most severe negative consequences of development, the report strongly argued that environmental problems in the South resulted largely from under-development itself (the second conclusion of the 1971 resolution). "They [environmental problems] are predominately problems that reflect the poverty and very lack of development of their societies. They are problems, in other words, of both rural and urban poverty....[and] can be overcome by the process of development itself."<sup>22</sup>

The report listed a second set of problems related to the development process itself that required attention from developing countries. These problems included unemployment, urban growth, population growth without corresponding economic growth, and the threat of deforestation. Founex also acknowledged the potential side effects or problems associated with large scale irrigation, use of pesticides, and industrialization in general.<sup>23</sup> The remainder of the report spelled out specific environmental concerns and policy recommendations.

The report's significance, particularly for the purposes here, lies less in its recommendations or responses to particular environmental problems than in its influence on

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<sup>21</sup>Engfeldt 1973, 403.

<sup>22</sup>Founex Report 1972, 10.

<sup>23</sup>Founex Report 1972, 12.



norm creation. Its substantive influence lies in three areas. First, the report demonstrated that developing countries were concerned about environmental problems, but were deeply suspicious of how the international community would deal with such problems if treated in isolation from development. Second, the report differentiated the environmental concerns of developing countries from those of developed countries. Whereas developed countries wished to control byproducts of industrialization, developing countries' primary environmental concerns were disease, poor water quality and sanitation, nutrition, and poor housing.

Finally, the report presented environmental concerns in the context of international norms consistent with developing country concerns, in particular those expressed in the Strategy for the Second Development Decade. For example, it emphasized the sovereign control of developing countries over their economic development and their own resources. That norm would later be entrenched in Principle 21 of the Stockholm Declaration. Hence, where conflict existed between the goals of social, cultural and economic development, trade-offs "can only be made by the countries themselves in the light of their own situations and development strategies and cannot be determined by any rules established a priori." Furthermore, the report reiterated this concern under a section on environmental policy formation: "The formulation of environmental goals, as indeed the formulation of economic and social policies in general, falls entirely and exclusively within the sovereign competence of the developing countries."<sup>24</sup>

Despite its emphasis on development, Founex did not present a specific set of development norms. It fostered an expanded notion of development beyond economic growth that included other social and cultural goals. However, it established no clear definition of development nor did it specify the relationship between broader social goals and economic growth. The achievement of this inclusive notion of development seemed to be taken as a matter of faith. The report only discussed trade-offs in the broadest sense and maintained a cautious approach to any measures that might limit short-term growth. For example, the report highlighted the opportunity for developing countries to house polluting industries (such as petroleum, pulp and paper, and chemical industries) from the North, and presumed that the worst environmental costs of such industries could be avoided. "Such a development," the report stated, "opens up an opportunity for the developing countries to move into some of these

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<sup>24</sup>Founex Report 1972, 11, 22.

industries if their natural resource endowments, including relatively less used environmental resources, create a comparative advantage in these fields.”<sup>25</sup> Founex also noted that “to the extent that these objectives [environmental, social, and cultural] support or reinforce economic growth -- and it can be shown that some of them do -- their place would be more readily established.”<sup>26</sup> Economic development still clearly took priority.

Assessments of the Founex meeting differ on whether it truly achieved a synthesis of environment and development concerns. For example, Adams suggests the meeting primarily served to allay developing world fears about the economic effects of environmental policy. “In fact the Founex meeting did not break new conceptual ground. It simply repeated the statement of faith that development and environment could be combined in some way which would optimize ecological and economic systems.”<sup>27</sup>

Similarly, an independent assessment of implementation done 10 years after Stockholm suggested that Founex successfully made the interests of developing countries known, but Stockholm as a whole did not produce the resources or commitment necessary to address those issues. It also downplayed the conceptual contribution of Founex:

Although the Founex report represented a useful start for the continuing debate on environment and development, at the time of the Stockholm Conference the issue was still largely perceived as a choice between environment or economic growth.<sup>28</sup>

Consequently, developing countries mainly argued that they needed additional resources and assistance to enable them to take the environment into account. On this, Stockholm did not deliver.<sup>29</sup>

In sharp contrast, McCormick, who also references a number of other observers, argues that Founex produced a consensus, forged by development economists, that the environment is a

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<sup>25</sup>Founex Report 1972, 32. As an illustration of how much has changed in the South, note that worldwide condemnation met a similar proposal made by World Bank Chief Economist Lawrence Summers in a 1991 internal bank memo (that was subsequently leaked). See Rich 1994, 246-249.

<sup>26</sup>Founex Report 1972, 11.

<sup>27</sup>Adams 1990, 37.

<sup>28</sup>The Agesta Group AB Sweden 1982. The report backs up its findings with a detailed breakdown of the implementation record of the 109 proposals in the action plan.

<sup>29</sup>The Agesta Group AB Sweden 1982, 3.

critical dimension of successful development. Founex also destroyed the idea that the two concepts were necessarily incompatible. McCormick argues that Founex convinced participants of the widespread nature of environmental concerns and that they should not be a barrier to development, but part of the process.<sup>30</sup> Nonetheless, representatives at Founex also, to quote Maurice Strong, “made it clear that they thought under-development and poverty constituted the most acute and immediate threat to the environment of their peoples.”<sup>31</sup>

Founex also demonstrated much about the complex interaction between personal diplomacy, political and economic interests, and science in the lead up to Stockholm. Founex would not have occurred without the leadership of Maurice Strong, the secretary-general of UNCHE. One analyst credited his “patient missionary work” with developing country governments and experts for avoiding a major North/South rift. Strong used meetings such as Founex and a scientific meeting in Canberra to air out the strongest aspects of the North/South rhetoric. And, in the PrepComs and in discussions with developing world governments, he constantly emphasized the compatibility between environment and development.<sup>32</sup>

Strong’s influence extended beyond his role as a good organizer, facilitator, and negotiator, for which he received similar accolades at the Earth Summit. First, Strong’s appointment as secretary-general signified the politicization of the Stockholm conference. His appointment came relatively late in the preparatory process when he replaced Jean Moussard, a Swiss biologist originally chosen in 1969 as the Director of Studies responsible for the Conference proceedings. By mid-1970 it had become apparent to the United Nations leadership that Moussard, though successful in gathering scientific data, would not provide effective leadership needed to make the conference a success. U.N. Secretary-General U Thant, with the support of U.N. Under Secretary for Economic Affairs Philippe de Seynes, who had appointed Moussard, picked Strong, who had been head of the Canadian International Development Agency and President of Power Corporation in Canada.<sup>33</sup>

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<sup>30</sup>McCormick 1989, 92-93.

<sup>31</sup>Strong 1977, 166.

<sup>32</sup>McCormick 1989, 95.

<sup>33</sup>Herter, Jr. and Binder 1993, 2.

Strong was particularly suited for the job because of his personal connections with developing country leaders and the respect he had among them.<sup>34</sup> For example, his direct intervention probably convinced Indian leader Indira Ghandi and People's Republic of China (PRC) Premier Zhou Enlai to attend personally. The acceptance of the latter leader, although it created additional political wrangling, greatly increased the prestige of the conference and gave added strength to the developing world view.<sup>35</sup> Whereas Moussard saw the problem of the environment as a scientific one, Strong recognized the pragmatic requirements of multilateral negotiations. His personal style succeeded in brokering compromises among disparate political interests, building trust, and creating momentum for agreement.

Strong also directly influenced how the problem of the human environment would be characterized. Almost immediately upon his appointment in January 1971, Strong convened a meeting of five or six experts at MIT, including Donella Meadows and Jay Forrester of Limits to Growth. Carroll Wilson, a friend of Strong's and one of the leaders of the Club of Rome at MIT, set up the meeting. Peter Thacher, of the U.S. Mission to the United Nations, was also present. In a published interview, Strong said, "Basically, our objective was to entrench the issue of the control of the environment with the economic-development process, both in developing and industrialized countries."<sup>36</sup> That meeting produced the slogan that summarized the Stockholm mission: "to protect and enhance the environment for present and future generations."<sup>37</sup> The U.S. influence shows through in that this slogan essentially represented a conservation ethic already present in U.S. legislation. For example, the first goal of the U.S. National Environmental Policy Act (1969) is to "fulfil the responsibilities of each generation as trustee of the environment for succeeding generations."<sup>38</sup> With its emphasis on inter-generational equity, this slogan presaged

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<sup>34</sup>Herter, Jr. and Binder 1993, 12-13.

<sup>35</sup>Rowland 1973, 37 says that Strong's first decision was to dispatch Chester Ronning, a seasoned Canadian diplomatic trouble-shooter, to Beijing to convince the Chinese Premier to attend. Rowland suggests that Strong's integrity played a large role in Zhou's acceptance. Rowland also argues that it might have helped that Strong could claim a distant relationship to the late Anna Louisa Strong, a left-wing American journalist and friend of the Chinese revolution.

<sup>36</sup>Quoted in Herter, Jr. and Binder 1993, 21.

<sup>37</sup>Herter, Jr. and Binder 1993, 21.

<sup>38</sup>Quoted in Jackson 1995.

only the conservation side of sustainable development, not the integration of environment and development.

However, Strong also convened a meeting of development experts that he called “the single most influential meeting in terms of my development of the agenda.”<sup>39</sup> This meeting in New York specifically aimed to bring development onto the Stockholm agenda. It provided a forum to hash out many of the issues that would be aired more formally in the Founex meeting, and many of the participants overlapped. Strong asked Barbara Ward (Lady Jackson), a well-known British developmental economist and environmentalist, to bring together a small group of prominent development experts. Most of the experts were economists from the developing world, many of whom continued to have a major influence on environment and development governance. The group included Gamani Corea of Ceylon, Mahbub ul Haq of Pakistan (with the World Bank, and later finance minister of Pakistan and architect of the United Nations Development Programme human development reports), Abdlatif Y. Al-Hamad of Kuwait, Enrique Iglesias of Uruguay (who served as foreign minister, later headed the Brundtland Commission’s advisory panel on energy, and then worked at the Interamerican Development Bank), and James Wolfensohn (who at the time of writing was president of the World Bank). Strong said his “whole thesis” when he agreed to run UNCHE was the need to integrate environment and development and this meeting helped to formulate how that could be done to reshape the Stockholm agenda.

#### *The Declaration on the Human Environment*

Of the outcomes of UNCHE, the Declaration best expressed the norm-complex that emerged and the compromises it embodied. The final draft declaration produced by UNCHE had changed in purpose and substance from its original conception in March 1970 as a largely educational and inspirational document of basic principles. By the third PrepCom in September 1971, the influence of Founex and increased public attention had combined to put pressure on the intergovernmental working group to produce a document that represented concrete action.<sup>40</sup>

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<sup>39</sup>Maurice Strong, author’s interview.

<sup>40</sup>Rowland 1973, 87.

The first move in this direction came from an early Canadian draft. It proposed a legalistic document that listed substantive norms and principles that could be a basis for international law.<sup>41</sup> The principles included norms of sovereignty and state responsibility for pollution produced within its own territory that caused damage in other states or in common areas beyond national jurisdiction. In addition, states whose pollution harmed neighbours would be obligated to compensate them and would be required to consult neighbours when such pollution was likely to result. Although the final draft declaration would retain these principles relatively unchanged in Principles 21 and 22,<sup>42</sup> the Canadian document, stated in terms of rights and obligations, said virtually nothing about the relationship between environment and development.

By the end of the conference, however, the environment/development compromise played a central role while the strict legal language of rights and obligations was watered down. Although some of those changes occurred before the intergovernmental working group handed the draft over to the fourth PrepCom in March 1972, many occurred afterward in the more politicized atmosphere of the conference itself.

The Chinese delegation played a major role in re-opening the Declaration to amendments and discussion. Its motives ranged from a simple desire to be heard (the PRC had been left out of deliberations by the intergovernmental working group) to an attempt to use the Declaration for ideological purposes. In the end, the PRC did play a positive role in re-introducing many of the development issues that appeared in working papers, such as the Founex report and Report by the Secretary-General on Development and Environment largely based on Founex.

The Chinese delegation presented a 10-point statement to the draft committee and also leaked it to the press through an NGO newspaper, ECO. The first point brought forward a view of environment and development that epitomized the uneasy meshing of concepts that

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<sup>41</sup>Reproduced in Rowland 1973, 88.

<sup>42</sup>However, the principle of advance notification, although in the draft declaration as principle 20, did not appear in the final document of June 16. (Brazil insisted it be put over to the general assembly, for essentially short-term political reasons, as it was then embroiled in a dispute with Argentina to which the principle would apply). Some developing countries also feared the principle could be abused by developed states to impede development projects. The Canadian delegation in its speech to the plenary argued that principle 20 still reflected a duty under existing customary international law. It did appear in watered down form in UNGA res. 2995 (XXVIII). It also appeared in various forms in later environmental agreements and the Rio Declaration entrenched it formally in principles 18 and 19. See Rowland 1973, 99, 135-136; Grubb et al. 1993, 89; and Sands, et al. 1994, 8.

characterized the current stage in international environmental norm creation. The statement on the “relationship between economic development and environment” read as follows:

Economic development and social progress are necessary for the welfare of mankind and the further improvement of the environment. The developing countries want to build a modern industry and agriculture to safeguard their national independence and assure their development. A distinction must be made between these countries and a few highly developed countries. The environmental policies of each nation must not impede development.<sup>43</sup>

Other points included: a statement that downplayed the then popular cataclysmic forecasts on population growth and called for moderate national responses such as control of urban population and family planning; national sovereignty over resources; a proposal on pollution compensation (in line with the original Canadian proposal); and a proposal for technology transfer. Although subsequent discussions sometimes broke down into North/South rhetoric and acrimony (with the U.S. taking the hardest line against the Chinese proposals), a consensus gradually emerged on many of the key issues. For example, Canadian and Chinese positions overlapped on many of the core legal principles and some developed states actively supported Chinese and African positions on development issues. Disagreements over specific proposals occurred both within and between developed and developing countries, so the final negotiations were not simply a North/South affair. Although issues such as colonialism, nuclear weapons and the war in Indochina sometimes appeared ready to sabotage agreement, in the end they did not have a substantial impact on the general consensus achieved in the final declaration.

Negotiations over the final wording in many cases came down to incorporating developing country proposals, particularly China's, into the wording of the draft declaration. For example, the language in paragraph four of the preamble came from a Chinese proposal that identified under-development as the cause of most environmental problems in the developing world. Also, a Chinese proposal changed the emphasis in paragraph five on population from a position that “excessive population growth can defeat man's [sic] efforts to preserve the [E]arth's environment” to a position that identified people as “the most precious” of things in the world

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<sup>43</sup>Rowland 1973, 92.

and the source of social progress and wealth, while acknowledging “problems” that can accompany population growth.<sup>44</sup>

The final negotiations also moved the Declaration more toward distributive policies and away from a strict focus on conservation. Principles 5 and 10 exemplified this trend. Principle 5 stated that “The non-renewable resources of the [E]arth must be employed in such a way as to guard against the danger of their future exhaustion and to ensure that benefits from such employment are shared by all mankind.” A series of changes to the principle prior to the conference concerned only the wording on conservation of resources. A Pakistani proposal at Stockholm added the second part, that would “ensure that benefits... are shared by all mankind.” As Sohn points out, this language of distributive justice was consistent with language in other declarations, such as the Sea-bed Declaration. Similarly, Principle 10, newly proposed at Stockholm by nine African states, noted that “stability of prices and adequate earnings for primary commodities and raw material are essential to environmental management” for developing countries. These principles fit with the general thrust of Principle 2 as well, which implied a duty to preserve the Earth’s resources for the benefit all people.

The principles can be divided into three general categories: conservation; development; and state sovereignty and responsibility.<sup>45</sup> As the above discussion suggests, the themes sometimes overlap within various principles, reflecting compromises worked out during the course of negotiations.

Principles 1-7 primarily delineated facets of human activity that required attention for conservation and environmental protection. Principle 1 was a general statement about the responsibility to preserve the environment for “present and future generations.” (Although it also contained admonitions against apartheid, discrimination and foreign domination, for example, these aspects are not particularly relevant to the development of the norm-complex under investigation). Principles 2-7 covered specific aspects of that responsibility, from preserving wildlife (4) and natural resources (2), both renewable (3) and non-renewable (5), to pollution

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<sup>44</sup>Sohn 1973, 443-444. Sohn presents a paragraph by paragraph analysis of the Declaration that includes the evolution of wording in negotiations. The following discussion draws heavily on his summary.

<sup>45</sup>United Nations 1972b.



concerns on land, in the air (6) and in the seas (7). As mentioned, some of these principles were altered to stress a greater emphasis on distributional concerns, not simply conservation.

Principles 9 through 13 specifically addressed concerns of development in developing countries. Most significantly, Principle 9 called for “accelerated development through the transfer of substantial quantities of financial and technological assistance” as the best response to environmental problems in the developing world. It also directly linked environmental vulnerabilities to under-development. Principle 10 asserted that stability of commodity prices is essential for developing countries to manage the environment effectively. Principle 11 admonished states against the use of any measures to protect the environment that could adversely affect development or the ability to raise the standard of living in developing countries. Principle 12 called for additional financial and technical assistance (above other development aid) for environmental protection in developing countries. Principle 13 placed development as the primary concern in planning, but says it should be “...compatible with the need to protect and improve the human environment....”

Principles 14-20 do not fit into the three categories above, but I will briefly mention them to keep the remainder of the Declaration in context.

Principles 14-17 focused on national and regional planning. The significant aspect of these principles was the faith they conveyed in the ability of “rational planning” (14) to reconcile the needs of development and the need to protect the environment. Principle 15 called for planning in human settlements. Principle 16, on population, was a weak statement that governments, based on their own priorities and without prejudice to human rights, should apply demographic policies (either to decrease or increase populations) as it suits environment and development goals.

Principles 18-20 focused on scientific research and public education. Principle 20 also contained a call for the transfer of information, experience, and technology to developing countries, without economic burden, to facilitate research and development in those countries.

The statements on rights and duties of states can be found in Principles 21 and 22. As mentioned earlier, the original desire of some states to create strict rules of liability did not materialize in the final document, although the basis for such rules was present. (Nonetheless, little development of rules of liability in international environmental law has occurred since

Stockholm, as will be shown below in the section on UNCED). Environmental lawyers identify Principle 21 as the key norm for modern environmental law.<sup>46</sup> In conjunction with the United Nations charter and various General Assembly resolutions (for example, 1803/62 of 14 Dec. 1962 on Permanent Sovereignty over Natural Resources) it cemented the notion that states have “a sovereign right to exploit their own resources pursuant to their own environmental policies.” It advanced earlier United Nations resolutions because it also created a responsibility on the part of states to ensure that their activities do not cause environmental damage beyond their own jurisdiction. Principle 22 was meant to create liability from states who cause environmental harm beyond their borders and a duty by them to compensate the victims of pollution. However, the final version only required states to “co-operate to develop further the international law regarding liability and compensation....” As noted above, another principle originally proposed that would have created an obligation for states to notify others of activities that might cause environmental damage did not make it to the final declaration.

From a strict legal standpoint, it should be noted that the norms embodied in Principles 21 and 22 did not originate with Stockholm solely, nor did the non-binding Declaration create a consensus on their precise status in international law. For example, norms of state sovereignty over resources have roots both in the widely accepted rules around sovereignty and territorial integrity as well as various United Nations declarations and decisions of international tribunals that states have a responsibility not to cause damage to the environment of other states. This responsibility has been acknowledged at least as far back as the widely cited Trail Smelter case (1941), when an arbitration tribunal found Canada was responsible for damage in Washington State caused by fumes originating at a smelter in British Columbia.<sup>47</sup> The Stockholm Declaration itself is considered soft law, which, as I mentioned earlier, in recent times often represents a first step for new areas of international law being accepted as customary international law by states. Regardless of its origins, much of the Stockholm Declaration, and especially Principle 21, are now considered customary international law.

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<sup>46</sup>Sands et al. 1994, 7.

<sup>47</sup>The importance of the case to environmental law is cited in a wide range of publications. For example, see Sands 1994, xxxi.

Principles 23 and 24 are not easily categorized. The former generally recognized concerns of developing countries that each state can determine its own environmental standards based on its own values. In this way it fit with Principle 21 and the general concerns of developing countries covered in other principles already mentioned. Principle 24 calls for international cooperation through bilateral and multilateral arrangements to protect the environment. It too contained elements of the three identified categories by stressing efforts to “control, prevent, reduce and eliminate adverse environmental effects resulting from activities conducted in all spheres;” that in so doing “due account is taken of the sovereignty and interest of all States;” and that such efforts treat all countries “big or small, on an equal footing.”

Finally, Principle 25 called for the support of international environmental organizations, and Principle 26, largely a political add on, calls on states to eliminate nuclear weapons.

### *The Norm-Complex*

From the preceding discussion, a norm-complex characterized by an uneasy mix of conservation, economic development, sovereignty, and state responsibility norms can be seen to have arisen. As opposed to the contemporary norm-complex of liberal environmentalism, Stockholm produced two competing norm-complexes, one of sovereign developmentalism, the other of environmental protection. Since I examine the Stockholm conference as a nascent form of the current norm-complex, I will not use either of the above two labels or combine them in a confusing manner. It is enough to highlight the original attempt at a compromise that would develop into the current set of norms that guides international environmental activities. The following list identifies the key norms most relevant to this evolving norm complex.

#### **State Sovereignty and Responsibility:**

1. States have sovereignty over resources and environmental protection within their jurisdiction and are responsible for pollution they produce beyond their borders (Principles 21-23).

### Political Economy of Environment and Development:

2. The sources of environmental problems differ in developed and developing countries and so should responses.
  - a) In developing countries, accelerated economic and social development (which are not specified) are compatible with and necessary for environmental protection (Principles 11, 12, and 13).
  - b) In developed countries, industrialization and technology require regulation to protect the environment.
3. Free trade must be balanced with commodity price stability (Principle 10).
4. Environmental protection requires substantial transfers of financial aid, technology, and scientific information to developing countries (Principles 9 and 20).
5. States should cooperate to conserve and enhance the global resource base for present and future generations (Principles 1-7 and 24).

### Environmental Management:

6. Command and control methods of environmental protection are favoured over market allocation. The integration of economics and environment is limited to "rational planning," which is left ambiguous in meaning.<sup>48</sup> This last norm seems to apply to national and international planning. However, the economic and social implications of planning are not clearly specified.

As I have argued, these norms contain environmental concerns side by side with a vision of development consistent with demands put forward in fora such as the G-77. The norms are consistent with a vision of environmental protection promoted by Western environmentalists who saw development and environmental protection as different tasks, the latter being concerned with regulating "externalities."<sup>49</sup> A synthesis was not achieved as the norms merely assert the compatibility of environment and development goals without specifying trade-offs or how to make linkages.

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<sup>48</sup>On the one hand "rational" implies the use of instruments such as environmental impact assessments to set guidelines for development or to define "optimal pollution levels" (Colby 1990, 16-17). On the other hand, the OECD (1971) equated rational management explicitly with management in "accordance with basic economic principles." In other words, rational management concerns "how to internalise environmental effects in economic mechanisms so as to ensure a rational allocation of costs." Given the usage by conservationists in the '70s and '80s, I would argue that rational planning at Stockholm fits with the first view above.

<sup>49</sup>Colby 1990, 8.

Since I am concerned with norms of governance, I have not detailed specific recommendations of environmental protection. The action plan is significant for the purposes here only in so far as its recommendations do indeed generally support the normative framework of the Declaration. The plan contains, among other things, recommendations on pollutants to monitor, facets of human settlements that require attention, and a framework to manage natural resources. I do not mean to imply that the specific recommended actions on the environment were not very important. Rather, my focus has been on how the international community has attempted to govern such activities at the international level, not on the targets of action or the effectiveness of environmental protection *per se*.

Despite the mix of environment and development, international environmental law and practice following Stockholm primarily emphasized the environmental protection side of the norm-complex. Developing countries were slow to embrace the environmental protection norms promoted at Stockholm while developed countries focused attention mostly on pollution abatement and clean-up at home. A detailed independent study on the implementation of the Stockholm proposals 10 years later found that “The expectations and objectives of the developed countries were largely achieved at and after the Stockholm Conference but, of course, to varying degrees.”<sup>50</sup> (Although, the report also lamented the decline in political will to address environmental problems in North and South alike by 1982). The two priorities on which developed countries focused were identification and control of pollutants of broad international significance and environmental aspects of natural resource management. In contrast, developing countries received “no significant” additional financial resources to help them deal directly with environmental problems. Despite the success of incorporating developing country concerns into the Declaration, “the issue was still largely perceived as a choice between environment or economic growth.”<sup>51</sup>

The above list of norms will serve as the point of comparison, when, later in this chapter, I enumerate the norm-complexes that emerged from the Brundtland Report and UNCED.

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<sup>50</sup>The Agesta Group AB Sweden 1982, 3.

<sup>51</sup>The Agesta Group AB Sweden 1982, 3-4. See also Colby 1990; and Sagasti and Colby 1993, who characterize the period following Stockholm as dominated by an environmental protection management “paradigm”, defined as a reliance on legal regulations aimed to make short-term economic trade-offs to protect the health of people and a few species and the separate treatment of environment and economics.

## **From Stockholm to Sustainable Development**

On the path from Stockholm to the Rio Earth Summit, “sustainable development” emerged as the dominant conceptual framework for international environmental governance. The set of norms produced at Stockholm lacked a unifying theme either to forge a consensus between North and South or to capture the imagination of world opinion. Sustainable development meant to change all that. In one concept, environmentalists, economists, planners, industrialists and governments of all political persuasions could find a unity of purpose, if not agree on how that might be accomplished. As one author put it:

It is not surprising that such a concept has received widespread support from leaders of the North and South alike, environmental and Third World movements, international bureaucrats and enlightened managers of financial and economic institutions and structures in both capitalist and socialist countries. This is explained by the artful vagueness which the new paradigm of ‘sustainable development’ casts upon their respective responsibilities.<sup>52</sup>

Its vagueness, rather than condemning it to the trash heap of development concepts, made it the favoured mantra of international environment and development communities.

This section focuses on the evolution of the language of sustainable development in international discourse, its sources, and its eventual delineation in the prominent World Commission on Environment and Development. Divergent paths from Stockholm, roughly corresponding to Northern and Southern positions, eventually converged around the “sustainable development” concept. Two developments in 1974 set the normative character of those paths: the development of guidelines for the Polluter Pays Principle in the North and the Cocoyoc Declaration in the South. Whereas international cooperation in the North focused on methods of internalizing environmental costs with minimum disruption to markets, the South sought an overhaul of the international economic order, which it felt relied too heavily on the market to the detriment of the poor.

### *The North*

The development by the Organization for Economic Cooperation and Development

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<sup>52</sup>Pallemaerts 1994, 14.

(OECD) in 1974 of guidelines to implement the Polluter Pays Principle (PPP) set the tone for the North.<sup>53</sup> The OECD originally developed the PPP two years earlier, not as a rule of liability, but as a means to avoid environmental regulations that might alter the operation of the market and particularly of free trade.<sup>54</sup> Under PPP, polluters internalize the costs of pollution. In other words, they should bear the cost of pollution they cause and resources they use “to ensure that the environment is in an acceptable state.”<sup>55</sup> This principle marked the start of a trend to incorporate environmental costs into production, markets, and accounting practices, rather than favour command-and-control regulation to combat environmental damage. Under PPP, public choice might determine the level of environmental protection sought, but, ideally, implementation of such standards would rely on the manipulation of market incentives, not strict end-of-pipe regulations. Admittedly, PPP in practice often took shape in the form of direct regulations based on standards, permits, and so on, which impose costs on meeting those standards to the polluter. Even in such cases, however, PPP relies on proper pricing so that market signals to consumers, for example, will reflect the full social and environmental cost of goods produced. Furthermore, the spirit of the principle implies the use of market-friendly instruments such as pollution charges and tradeable pollution permits, as evidenced by a growing trend in supporting such instruments in implementing the PPP in the 1980s and 1990s.

At the international level, the OECD intended the principle to “avoid distortions in international trade and other economic relations which might arise from differences in member countries['] pollution control measures.”<sup>56</sup> Under this principle, subsidies, for example, would not accompany measures to implement the principle since they distort the market. The notion of ‘getting prices right’ and the field of environmental or ecological economics that primarily concerns itself with this task, follow from this basic principle.<sup>57</sup>

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<sup>53</sup>OECD 1974.

<sup>54</sup>Jim MacNeill, author’s interview. MacNeill was involved in the initial formulation of the PPP and was later OECD environment director (1978-1984). See also OECD 1972, 1975.

<sup>55</sup>OECD 1972.

<sup>56</sup>OECD 1972.

<sup>57</sup>Turner 1995, argues that whereas environmental economists merely extend neo-classical economic theories to non-market phenomena, such as commons resources or public goods, ecological economists attempt to combine ecology and

Despite the intentions of its framers to limit the PPP to an economic principle, some Southern states have attempted to use the principle for political ends. For example, they have used PPP to emphasize the responsibility of developed countries, as the historic site of the majority of practices that damage the global environment, for past environmental damage. Subsequently, they argue, the North ought to shoulder a higher proportion of the costs associated with international environmental preservation and management.<sup>58</sup> However, in policy and legal terms, PPP has the more narrow meaning ascribed to it. Hence, other norms, such as that of “common but differentiated responsibility” supported at Rio, have been required to invoke the broader implications sometimes associated with PPP.

It should also be apparent that the underlying logic of PPP and similar mechanisms ensures support for economic growth. The developers of this principle believed that if environmental protection can be achieved with a minimum distortion of markets, economic efficiency and growth would be maintained, thus minimizing the need for trade-offs between growth and environment. In fact, the originators of PPP explicitly meant it to avoid distortions in international trade that might limit growth. The rationale of internalizing environmental costs came later, according to Jim MacNeill, a Canadian delegate and organizer of the OECD environment committee in 1970, who later became director of the environment at OECD (1978-1984): “...the driving force was to ensure that environmental subsidies to business and industry by governments did not result in major trading distortions.” Later the economic efficiency arguments, present in the academic literature from the start, overshadowed trade distortion arguments. “The PPP is now not seen in that light at all. It’s seen as an economic efficiency principle.... It’s seen as a means of internalizing environmental costs in the price of products.”<sup>59</sup>

The OECD’s work in this area received a tremendous boost when, in 1984, Environment Director Jim MacNeill organized the “Environment and Economics” conference. The OECD economics establishment fully supported the conference, which helped to make it a major

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economics. For example, they attempt valuations of ecosystems and evaluate replacement costs – the cost to substitute artificial for natural processes that sustain a healthy environment.

<sup>58</sup>Sands et al. 1994, xxxiv; Maurice Strong, author’s interview; and personal observations of developing country speeches at the First Conference of the Parties for the Framework Convention on Climate Change, Ministerial Segment, 4-7 April 1995, Berlin.

<sup>59</sup>Jim MacNeill, author’s interview.



influence on governments and business in the direction of the OECD environment committee's vision of environmental governance.<sup>60</sup> The conference emphasized the desirability of strengthening the role of economic instruments and the reciprocal positive linkages between environmental protection policies and economic growth.<sup>61</sup> The pivotal role the conference played in legitimating these linkages, thus in influencing the future direction of environmental governance, is discussed further in chapter four. Briefly, the conference helped to shift the way governments, business, and the economic establishment at the OECD thought about environmental issues and the best ways to address them. In particular, it cemented the view that economic growth and environmental protection could be compatible. MacNeill's later role as secretary-general of the Brundtland Commission ensured those ideas would also influence efforts at global governance for some time.

Major industrial states during this period, to varying degrees, also began to reformulate the importance and direction of environmental policy. Here, too, one finds that increased attention to environmental concerns led to increased efforts to find a fit between those policies and liberal economic norms. The general trajectory of European Community (EC) goals, for example, followed a similar pattern to that of the OECD, although European policy lagged slightly in comparison. From the start, Article 2 of the 1957 Treaty of Rome spelled out the fundamental objectives of the Community in economic terms. Whereas one would not expect this pre-Stockholm document to focus on environmental concerns, significantly the Single European Act of 1987, which contained a new chapter on a legal basis for community action on the environment, left Article 2 with its economic focus. The Maastricht Treaty finally reformulates EC objectives, but calls for the promotion of "a harmonious and balanced development of economic activities [and] sustainable and non-inflationary growth respecting the environment."<sup>62</sup> Significantly, the language used in the Community debate on sustainability had been that of "sustainable development" at least since the Brundtland report. However, at the

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<sup>60</sup>The role of the OECD environment committee, where much of the work on environment and economics originated, is discussed further in chapter four.

<sup>61</sup>OECD 1985.

<sup>62</sup>Title II: Provisions Amending the Treaty Establishing the European Economic Community With a View to Establishing The European Community, Article G paragraph B.2.

Rome Summit of December 1990, which considered the future work of the Intergovernmental Conference on Political Union, heads of government requested that the conference consider protection of the environment to ensure “sustainable growth.” Despite some discussion of the change in terminology, the growth language stood during negotiations toward 1992 and no head of government tabled the issue at Maastricht.<sup>63</sup> The language of growth and open markets thus circumscribes the language of environmental concerns in EU documents.

This discussion should not imply that the EU lacks a serious concern for environmental protection within its borders or in its relationship to the developing world. In fact, since 1987 the EU has led the West in pushing forward the international environmental agenda. The above discussion merely points out that the EU’s framing of environmental concerns rests on a primary concern with economic growth and that sustainable development is defined in such a way as to be compatible with growth and market forces.

The United States took an even stronger pro-market view, especially under the Reagan administration.<sup>64</sup> A convincing case can be made that the shift in policy to de-regulation, cost-benefit analysis and heavier reliance on market incentives came from an ideological shift rather than an assessment of policy effectiveness. For example, a study by Kraft and Vig traced administrative changes that consistently put political control of the environmental agenda above expert administration.<sup>65</sup> A key turning point in U.S. policy came when the Reagan administration virtually ignored the report of a transition task force on the environment that it set up. The report advocated moderate reforms that would ease some regulations, reexamine some laws, promote some economic incentives for environmental protection, but generally maintain the momentum for environmental protection. Instead, Reagan’s environmental policy followed the much more radical position advocated by the conservative Heritage Foundation and Secretary of the Interior James Watt. He firmly believed in de-regulation and that most resource problems could be solved by opening them up to the free market. That view extended to U.S. foreign policy. For example, in 1982, at a special session of UNEP to commemorate the tenth anniversary of the

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<sup>63</sup>Verhoeve et al. 1972, 14-15.

<sup>64</sup>McCormick 1989; and Kraft and Vig 1984.

<sup>65</sup>Kraft and Vig 1984.

Stockholm Conference, Environmental Protection Agency Administrator Anne Gorsuch announced the unequivocal compatibility of growth, environmental protection, and markets:

Individual ownership of property, free and well-developed markets in products and capital are powerful incentives for resource conservation. These institutions best promote the use of renewable resources and the development of substitutes for non-renewable resources, ensuring continued resource availability and environmental quality.<sup>66</sup>

### *The South*

While Northern policymakers concerned themselves with methods to internalize environmental costs, the South in 1974 produced the Cocoyoc Declaration at a meeting in Mexico on 8-12 October. The Symposium on Patterns of Resource Use, Environment, and Development Strategies, billed as Founex II, brought together 33 delegates from eight developed and 14 developing countries.<sup>67</sup> Maurice Strong, then executive director of UNEP, and Mostafa K. Tolba, who took over the post shortly thereafter,<sup>68</sup> also attended the conference jointly sponsored by UNEP and UNCTAD. Founex II meant to further the work on environment and development started at Stockholm. Delegates discussed development strategies and international economic relations, analyzed environmental issues and the limits of natural resources in particular, and addressed the development debate then occupying the United Nations where the NIEO had just been introduced. The backdrop of the NIEO and the onset of the first oil shock a year earlier set the tone for the vision of environmental management that emerged.

A deep distrust of market mechanisms undergirded The Cocoyoc Declaration.<sup>69</sup> It began with a stark summary of the lack of progress on poverty, hunger, illiteracy, disease, and homelessness, and the newer problems of resource degradation. It argued that the maldistribution of resources and overconsumption by the wealthy lies behind humanity's inability to meet the "inner limits" of satisfying fundamental human needs and the "outer limits"

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<sup>66</sup>Gorsuch 1982.

<sup>67</sup>McCormick 1989, 152.

<sup>68</sup>Tolba officially took over December 1976, but unofficially began to run UNEP immediately after Strong stepped down in 1975.

<sup>69</sup>UNEP 1981, 109-119.

of the planet's resources. The solution, the report said, "cannot be left to the automatic operation of market mechanisms. The traditional market makes resources available to those who can buy them rather than those who need them, it stimulates artificial demands and builds waste into the production process, and even under-utilizes resources." The critique of the market extends to domestic systems of the time where the benefits of growth accrued to a small percentage of the wealthy while the poorest 20 per cent grew poorer still.

The remainder of the Declaration set out the goals of development, which, it stated, should first provide for basic needs. Its recommendations fit with the vision of global economic management sought in the NIEO and the Charter of Economic Rights and Duties of States, both of which the Declaration explicitly endorsed. The Declaration's recommendations were as follows:

1. Governments, international organizations, and scientific communities should develop and institute policies that aim to satisfy the basic needs of the poorest and redistribute resources where possible. At the same time, they should ensure adequate conservation of resources and protection of the environment.
2. Within the framework of sovereignty over resources, governments and international institutions should promote the management of resources and the environment on a global scale.
3. Strong international regimes should be established for the exploitation of the global commons, and the use of the commons should be taxed for the benefit of the poorest strata of the poor countries.
4. Scientific and technological research and development should establish new priorities to respond to the goals of the report.
5. New development priorities should aim to curb overconsumption in the North and step up the production of essentials for the poor.

Hence, Cocoyoc placed the correctives to environmental problems squarely in the context of overall demands for a redistribution of resources. It had a bias toward global management of global resources and schemes for transfers from rich to poor to pay for the maintenance, equal access to, and use of global commons (e.g., through taxation of the commons). Again, these proposals conflicted with liberal economic norms of free trade and market incentives and mechanisms for environmental protection and technology transfer.

Like the NIEO, however, the Cocoyoc Declaration had little lasting influence in terms of its practical policy application. Nonetheless, it illustrated the state of development thinking at

the time and how United Nations agencies concerned with development would view the environment agenda. As such, it marked the basis of environmental governance initially favoured by the development community from the South.

### *UNEP's Role*

Meanwhile, UNEP continued the Stockholm conference's work of reconciling environment and development. Indeed, by 1976, many delegates at UNEP's fourth Governing Council questioned the need to continue to defend the linkage of environment and development, which they felt had already gained wide acceptance.<sup>70</sup> By 1980, the South appeared to verify this perception when it explicitly used the language of environmental sustainability in *The Strategy for the Third United Nations Development Decade*:

It is essential to avoid environmental degradation and give future generations the benefit of a sound environment. There is a need to ensure an economic development process which is environmentally sustainable over the long run and which protects the ecological balance. Determined efforts must be made to prevent deforestation, erosion, soil degradation and desertification. International cooperation in environmental protection should be increased.<sup>71</sup>

UNEP played a leadership role in developing this language. The secretariat, under the leadership of Maurice Strong, worked to clarify the linkage between environment and development with a conceptual middle ground that emphasized economic growth, but of a "sustainable" kind. By the mid-1970s the language of sustainability (although not necessarily sustainable development *per se*) could be found in UNEP documents and speeches of its leaders. Strong thus could announce a solid support for economic growth, but of a new kind that considered the social aspects of development. "Economic and ecological factors must be brought into harmony in developing growth-patterns that are sustainable," he told the first International Environmental Management Seminar in 1975. "'Eco-growth' does not mean 'no-growth'; indeed it means better growth, sounder growth, and perhaps even more growth in qualitative terms."<sup>72</sup> He similarly called for a "'new-growth' society" in more forceful language two years later:

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<sup>70</sup>McCormick 1989, 150.

<sup>71</sup>UNGA 1980.

<sup>72</sup>A modified version of the speech is reproduced in Strong 1975.

Surely it must be clear that present growth-patterns and practices are self-destructive and cannot be sustained! Is no-growth then the only answer? Let me say with all the force I can muster that no-growth is *NOT* the answer. The real alternative to no-growth is new-growth – a new approach to growth, in both the more industrialized and the less-developed societies. [emphasis in original].<sup>73</sup>

Language reminiscent of the G-77 Lima meeting's concern that environmental protection not interfere with "sustained economic development of developing countries" now had a positive environmental spin.

Although Strong labelled this vision "ecodevelopment," the "marriage" of ecology and economics, that term never really caught on with developing world governments. Nonetheless, United Nations agencies such as UNEP, United Nations Development Programme (UNDP) and the World Bank claimed to use the concept as a guide for incorporating environmental concerns into development planning. However, difficulties arose when translating the somewhat ideal language of ecodevelopment to the project level.<sup>74</sup>

Supporters of the concept point out its consistency with development thinking of the 1970s and its sensitivity to the complexity of ecosystems and how they respond to human interaction.<sup>75</sup> Themes such as local participation in projects, an emphasis on intermediate technologies, local self-sufficiency and basic needs dominated academic and institutional writings in this vein. However, its failure to address broader debates about the global political economy, North-South conflict or questions of macro-economic management likely accounts for its relative lack of success in capturing the interest of developing world politicians.

In general terms, ecodevelopment literature of the 1970s and 1980s overlapped with that on sustainable development. The main difference was an elimination of neo-Malthusian overtones contained in ecodevelopment's emphasis on small-scale development. UNEP had never really pushed that side of ecodevelopment, however, so the language and speeches of its leadership demonstrated the congruity of the concepts. Hence, ecodevelopment language merged with UNEP's later use of sustainable development terminology.

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<sup>73</sup>The speech to the Second International Conference on Environmental Future, Reykjavik, Iceland, is reproduced in Strong 1977.

<sup>74</sup>Caldwell 1990, 202-204.

<sup>75</sup>Adams 1990, 51-56.

Shortly after Strong stepped down as UNEP's head, he stated that ecodevelopment "would be designed to assure that the precious natural resources... in the less-developed countries are exploited in ways that make the best possible use of their own skills and labour, and harmonize with their own culture and value systems to produce the resource-base on which sustained development depends."<sup>76</sup> An analysis of Tolba's speeches through the 1980s shows many of the same themes emphasized, but with sustainable development language fully substituted. Themes of his included repeated assertions of the interdependence of environment and development, the importance of poverty alleviation as a first priority, and an emphasis on a new qualitative evaluation of growth.<sup>77</sup> Tolba also emphasized UNEP initiatives at cost-benefit calculations and the general economic benefits of environmental protection.

In this way, UNEP took on the challenge of Cocoyoc but eschewed no-growth language. Tolba effectively used NIEO language while he avoided anti-market rhetoric that might alienate support from OECD countries. Sustainable development and sustainable growth became compatible concepts, even if pure growth in GDP no longer sufficed. Thus his submission to the Brundtland Commission, while it discussed many aspects of "sustainable development" consistent with the view of ecodevelopment and sustainable development above, emphasized economic growth as the basis of it all:

The first and most important premise [to put sustainable development into action] is the generally agreed perception that economic development and environmental quality are interdependent and, in the long term, mutually reinforcing. The rational management of the world's threatened natural resource base forestalls a loss in environmental quality and enhances sustainable economic growth.<sup>78</sup>

All that was missing was a vision of governance to put such ideas into effect. The Brundtland Commission took on that task.

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<sup>76</sup>Strong 1977, 170. Note, one difference between Strong and his successor is the former's spiritual vision of a world where intellectual, moral and cultural pursuits slowly take over from material pursuits in human development (1977, 170). Tolba left such inspirational speculations to others, instead focusing on education and implementation of UNEP's view of sustainable development.

<sup>77</sup>Tolba 1987, 97-107.

<sup>78</sup>Tolba 1987, 150.

### **World Commission on Environment and Development (WCED)**

Two direct influences on WCED deserve mention to put the report in context: The World Conservation Strategy (WCS), often cited as the original source for the popular use of the term sustainable development; and a group of U.N. commissioned studies on development -- Willy Brandt's *Programme for Survival and Common Crisis* -- and security -- Olaf Palme's *Common Security*.

UNEP commissioned the International Union for Conservation of Nature and Natural Resources (IUCN) to produce the 1980 World Conservation Strategy.<sup>79</sup> The strategy intended to "stimulate a more focused approach to the management of living resources" and provide policy guidance for three groups: government policy makers and advisors, conservationists, and development practitioners, including aid agencies, industry, and trade unions. It received wide attention in those communities and proved somewhat effective in mobilizing national action on nature conservation. However, its lasting effect on norm creation at the international level was undercut by an inattention to political and economic factors that often lay behind stresses on living resources.

The final of three drafts, its authors admitted, was a compromise document. The IUCN prepared the document, but UNEP and the World Wildlife Fund (WWF), who financed the project, should be considered nearly equal partners as they played major roles in its preparation and influenced its themes and structure.<sup>80</sup> The United Nations Food and Agricultural Organization (FAO) and UNESCO also reviewed the final draft, which reflected wide consultations with interested parties from the conservation and development communities.<sup>81</sup>

The final strategy aimed to "help advance the achievement of sustainable development through the conservation of living resources."<sup>82</sup> As such, it primarily focused on conservation of living resources, although some sections did mirror ecodevelopment thinking, i.e., local development consistent with physical, biological and cultural resources, local participation, and

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<sup>79</sup>IUCN 1980.

<sup>80</sup>IUCN 1980, ii.

<sup>81</sup>See McCormick 1989, 162-170 for a history of the drafting.

<sup>82</sup>IUCN 1980, iv.



so on.<sup>83</sup> It defined conservation as “the management of human use of the biosphere so that it may yield the greatest sustainable benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations” (1.4). The definition comes close to Brundtland’s for sustainable development, except the WCED replaced “management... of the biosphere” with “development.” The strategy’s definition of development, similarly, focused on the “modification of the biosphere and the application of human, financial, and living and non-living resources to satisfy human needs and improve the quality of human life” (1.3). The definitional linkages are clear -- development, since it alters the biosphere, must take conservation into account to be sustainable. The solution, then, was to give conservation a higher priority.

The strategy contained three major objectives: (1) maintenance of essential ecological processes and life support systems such as soil, forests, agricultural, fisheries, and water; (2) genetic diversity; and (3) sustained utilization of species and ecosystems. It also contained a detailed set of priorities that addressed international concerns, but showed sensitivity to implementation at the local level.

Unfortunately for its supporters, WCS never overcame its lack of attention to the main concerns of developing country governments, nor did it take into account the essentially political nature of development. That problem, for example, meant an insensitivity to powerful interests in developing countries that favoured rapid development and growth over environmental protection, or to pressures in the international and domestic political economies to exploit resources. Hence, many of the suggestions lacked context. As one analyst put it, “[WCS] seems to assume that ‘people’ can exist in some kind of vacuum, outside the influence of equality, class or the structures of power.”<sup>84</sup> On the bureaucratic level, it also ignored the planning process in many developing countries where central planning agencies, not environment ministries, controlled linkages to international development agencies. That, and the politics of those agencies, made it more likely aid would flow to conventional projects such as industry, energy,

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<sup>83</sup>For example, sections 10.4.d, 13.4 and 13.5 on public participation in development planning and 14.10 and 14.11 on traditional knowledge in rural development.

<sup>84</sup>Adams 1990, 51.

and agriculture rather than for the development of a conservation strategy.<sup>85</sup>

Although WCS recognized North-South conflict in the international political economy, it did not successfully incorporate such concerns into the overall strategy. For example, while it explicitly endorsed a “new international economic order,” in the same sentence it called for a new environmental ethic, stabilization of populations and “sustainable modes of development” (1.1). Similarly, its final chapters listed the demands of the NIEO without specifying why or how they fit with the conservation program in the WCS. It asserted compatibility of those values by definitional fiat: “Development and conservation operate in the same global context, and the underlying problems that must be overcome if either is to be successful are identical” (20.1). Then, after listing NIEO demands – a 0.7 per cent ODA target, better terms of trade, accelerated economic growth, and so on – it merely stated that, “Achievement of equitable, sustainable development requires implementation not only of the measures indicated above but also of the World Conservation Strategy.” Finally, it urged that those conservation plans be included in the new International Development Strategy (20.5). Nowhere does WCS make the linkages between those aims explicit. Hence, its most lasting effect appears simply to have been the dissemination of the term sustainable development to governments and conservation advocates.

The Brundtland Commission meant to put sustainable development as it appeared in the WCS into a broader, development-oriented context. At the same time, it wished to further the multilateral and cooperative goals of the United Nations system. The Brandt and Palme commissions set the tone of Brundtland’s broader objectives of multilateralism and interdependence. Brundtland saw her task in Our Common Future explicitly as the third “call to political action” following on the two earlier projects on North-South economic relations and global security respectively. As such, she called the goal “to persuade nations of the need to return to multilateralism” as “perhaps our most urgent task.”<sup>86</sup>

The Cold War provided another important context. The Commission took on one of the few issues on which East and West could find common cause.<sup>87</sup> Already, organizations such as

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<sup>85</sup>McCormick 1989, 169.

<sup>86</sup>WCED, x.

<sup>87</sup>Finger 1993, 36-38.

the International Institute for Applied Systems Analysis (IIASA) in Austria had provided a forum for such cooperation. Brundtland hoped to build on such efforts. The Commission stressed a “same boat” mentality. Images of a single, fragile Earth and interlocking ecosystems marked the introduction of Our Common Future. It followed that the planet’s preservation required global environmental management and cooperation. Just as World War II produced the impetus for cooperation to build a post-war international economic system, “The challenge of finding sustainable development paths ought to provide the impetus – indeed the imperative – for a renewed search for multilateral solutions and a restructured international economic system of co-operation.”<sup>88</sup>

### *The WCED Report*

The significance of Our Common Future is threefold. First its high profile origins as a U.N. General Assembly mandated project, unlike the WCS, mobilized sufficient public and political interest to elevate international concern in the environment. Until then, the priority accorded to environmental issues had generally declined in the wake of recession and debt since Stockholm. To generate interest and participation, the Commission’s work included public hearings of senior government officials, scientists, other experts, industry, NGOs and other interested members of the public in all parts of the world.<sup>89</sup> The hearings generated over 500 submissions, constituting 10,000 pages of material. In addition, WCED appointed expert advisors to assist the secretariat in analyzing key issue areas, set up advisory panels on energy, industry, and food security, and commissioned a series of reports from experts and research institutions. These efforts combined to give the report credibility and a high global profile.

Second, WCED cemented the linkage between environment and development that until then had been confined largely to communities directly involved in international efforts to promote such linkages. It also ensured that the relationship between environment and development would be framed in the language of “sustainable development.” Third, it attempted to define the set of principles and norms that should underlie international efforts to obtain

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<sup>88</sup>WCED, x.

<sup>89</sup>WCED 1987, 359-361.

sustainable development. The first effect is self-explanatory, and the second two will be dealt with in turn.

### *Sustainable Development*

The Brundtland Commission originated in a 1981 UNEP proposal to prepare an environmental perspective to the year 2000 and beyond.<sup>90</sup> The following year UNEP recommended that a commission of eminent persons should help develop the perspective and mobilize public opinion. Finally, in 1983, after various consultations, the UNGA approved the establishment of a commission in resolution 38/161 without a vote. Its primary mandate was, “To propose long-term environmental strategies for achieving sustainable development to the year 2000 and beyond.” Secondly, its recommendations were to encourage cooperation between countries at different stages of development and to reach mutual objectives which “take account of the interrelationships between people, resources, environment and development.”<sup>91</sup> Although WCED rephrased its mandate somewhat, the thrust remained to identify problems of environment and development and to formulate realistic proposals to address them.

The Commission, chaired by Gro Harlem Brundtland, worked in parallel to the UNEP Council’s preparation of the Environment 2000 report.<sup>92</sup> The parallel process resulted not from a division of responsibilities, but from a turf war fought by the UNEP leadership who wanted control of the entire process.<sup>93</sup> That resulted in the marginalization of the UNEP report, whereas, by 1984, the work of the now-named World Commission on Environment and Development gained a high profile, overshadowing the UNEP process from which it originated. Both reports were presented to the UNGA in 1987 and came to similar conclusions. However, WCED placed a greater emphasis on the growth side of sustainable development whereas Environment 2000 more often used terms such as “environmentally sound development,” “effective environmental management,” and “sustained environmental improvements” in the statement of its goals. The

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<sup>90</sup>YUN 1982, 1000.

<sup>91</sup>UNGA resolution 38/161, para 8 a) and b) reproduced in YUN 1983, 772.

<sup>92</sup>YUN 1987, 661-679. For a summary of UNEP’s report see Dabholkar 1989.

<sup>93</sup>Author’s interview with a source who had high level contact with WCED and UNEP.

former view dominated future discussions, at least within the United Nations system, owing to the greater publicity and legitimacy granted to the WCED.

Our Common Future emphatically put environmental concerns in the context of an overall strategy of development. As Brundtland stated in the foreword:

When the terms of reference of our Commission were originally being discussed in 1982, there were those who wanted its considerations to be limited to 'environmental issues' only. This would have been a grave mistake. The environment does not exist as a sphere separate from human actions, ambitions, and needs....

...the 'environment' is where we all live; and 'development' is what we all do in attempting to improve our lot within that abode. The two are inseparable.<sup>94</sup>

Chapter 1 of WCED further placed this philosophical position squarely in the context of the international political economy, stating that: "It is therefore futile to attempt to deal with environmental problems without a broader perspective that encompasses the factors underlying world poverty and international inequality."<sup>95</sup>

Sustainable development was the cornerstone of WCED. Although defined variously, the most quoted definition reads as follows:

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:

- [1] the concept of 'need', in particular the essential needs of the world's poor, to which overriding priority should be given; and
- [2] the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future goals.<sup>96</sup>

Notwithstanding subsequent debates about the concept, WCED provided a relatively specific interpretation. First, needs refer to basic needs as defined by contemporary development discourse. Second, environmental limits are to be socially and technologically defined. Thus WCED framed the environment problematique in clearly cornucopian terms, a departure from the more ecocentric and conservation minded WCS.<sup>97</sup> In other words, according to WCED,

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<sup>94</sup>WCED 1987, xiii.

<sup>95</sup>WCED 1987, 3.

<sup>96</sup>WCED 1987, 43.

<sup>97</sup>For a recent treatment of these competing environmental ideologies, see O'Riordan 1995a.

decisions about limits must be made in the context of socio-economic goals and what technology allows. The two documents came to similar conclusions on what environmental problems needed attention, but the rationale for concern differed significantly.

That difference was most clearly expressed in Brundtland's emphasis on growth. From its first page, WCED countered the limits to growth reasoning that pitted the developing world against conservationists at Stockholm:

...Our Common Future, is not a prediction of ever increasing environmental decay, poverty, and hardship in an ever more polluted world among ever decreasing resources. We see instead the possibility for a new era of economic growth, one that must be based on policies that sustain and expand the environmental resource base.

The report made reviving growth the top strategic priority, in a sharp departure from earlier statements of global environmental policy. Specifically, WCED called for a minimum three per cent increase in per capita income (which equals five-six per cent of GDP growth per annum) in developing countries and policies to redistribute income to alleviate absolute poverty. That rate would eliminate poverty in 25 years according to the report and would require "accelerated global growth."<sup>98</sup>

The report also recommended a better quality of growth, less material and energy intensive. Thus it re-iterated the long-standing goals of UNEP noted earlier, while it played up those goals' foundation in economic growth. That foundation, it argued, led to the following other goals (after "reviving growth" and "changing the quality of growth"):

- meeting essential needs for jobs, food, energy, water, and sanitation;
- ensuring a sustainable level of population;
- conserving and enhancing the resource base;
- reorienting technology and managing risk; and
- merging environment and economics in decision making.<sup>99</sup>

These goals undergirded detailed recommendations on reforms and priorities for incorporating sustainable development in the areas of food security, energy policy, urban development, living and non-living resource conservation, population control and industry.

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<sup>98</sup>WCED 1987, 50-51, 89.

<sup>99</sup>WCED 1987, 49.

Two other goals were added in the Tokyo Declaration, made by the Commission in its final meeting on Feb. 27, 1987: to reform international economic relations, and to strengthen international co-operation. The former meant to prescribe the conditions for long-term growth. Specifically, the Declaration called for more equitable trade, capital and technology flows better synchronized with environmental imperatives, and fundamental improvements in market access, technology transfer, and international finance to help developing countries diversify their economic and trade bases and build self-reliance.<sup>100</sup> International cooperation applied to environmental research and monitoring and a general call toward multilateralism.

As these last goals indicate, Brundtland paid much more attention to international economic and institutional factors than did the WCS. It explicitly addressed the interactive linkages between poverty, environmental degradation and macroeconomic relations. For example, it discussed the dependence of many African countries on commodity exports sensitive to declining prices. It also pointed to Latin America where debt crises and subsequent austerity programs had increased poverty and hurt distributional programs. Those governments faced pressure to make repayment a priority, thus they encouraged exports to generate foreign currency and put other development goals on the back burner. Such policies, WCED argued, are neither ecologically nor politically sustainable: "To require relatively poor countries to simultaneously curb their living standards, accept growing poverty, and export growing amounts of scarce resources to maintain external creditworthiness reflects priorities few democratically elected governments are likely to be able to tolerate for long." Furthermore, WCED argued that these pressures were aggravated by economic policies of some major industrial countries, which had depressed and destabilized the international economy.<sup>101</sup>

The Commission favourably noted NIEO attempts to make economic arrangements more equitable, and to improve financial flows, trade, transnational investment, and technology transfer. Then, like WCS, it called for this program to consider ecological dimensions. However,

In the short run, for most developing countries except the largest[,] a new era of economic growth hinges on effective and co-ordinated economic management

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<sup>100</sup>WCED 1987, 365.

<sup>101</sup>WCED 1987, 75.

among major industrial countries -- designed to facilitate expansion, to reduce real interest rates and to halt the slide to protectionism. In the longer term, more changes are also required to make consumption and production patterns sustainable in a context of higher global growth.<sup>102</sup>

Some modification of the international economic order would be necessary to achieve this synthesis of environmental concern and development. However, the basis of that order, WCED argued, should remain proper management by the major industrial powers. Hence, the goals of the international order should remain broadly liberal: interdependence, modernization, and free trade to promote economic growth.

### *The Norm-Complex*

The Brundtland Commission promoted a governing norm-complex that encouraged a managed -- or what might be loosely termed Keynesian -- liberalism in the international economic order, infusing traditional forms of Keynesian intervention with an environmental bent. At the same time, explicitly environmental goals in domestic development policies and in international institutions such as UNCTAD, the World Bank, and GATT were to ensure that the economic order encouraged environmental concerns to be considered in decision making and to prevent a growth at all costs mentality.

The support of international Keynesian liberalism and interdependence remained largely unchanged from the Brandt reports. In this view, a sound global economy rests on free trade as the main engine of economic growth. However, selective interventions are accepted to propel developing countries into a more equitable position where they can better benefit from liberal economic institutions, or at least be cushioned from the impact of unfettered trade. Thus, on the one hand, WCED proposed a reduction in trade restrictions in the North, a reduction in real interest rates to ease debt payments, and an expansion of trade agreements to promote global economic growth. On the other, it supported increased financial flows in the form of aid from international development banks and other governmental sources, improved compensatory financing for commodity pricing to even out economic shocks, a strengthened bargaining position for developing countries *vis-à-vis* multinational corporations, and improved technology

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<sup>102</sup>WCED 1987, 75.



transfer arrangements, made possible by easing proprietary rights and encouraging joint ventures and cooperative research programs.<sup>103</sup>

It also gave the managed interventions it supported an environmental bent by, for example, proposing that increased aid should go toward projects that encourage sustainable development. The likelihood that such projects would involve higher local costs, a higher ratio of recurrent to capital costs, and a greater use of local technology and expertise, were not to deter lending in that direction. Such efforts might include “reforestation and fuelwood development, watershed protection, soil conservation, agroforestry, rehabilitation of irrigation projects, small-scale agriculture, low-cost sanitation measures, and the conversion of crops into fuel.”<sup>104</sup> WCED especially targeted the World Bank and IMF for reform since their lending conditions act as benchmarks for other government and private lenders. Both their internal procedures and selection criteria ought to change, WCED argued, to reflect environmental and social costs and goals. Similarly, domestic policies in the North and South should be reoriented to resource conservation and enhancement.

A comparison with the norms of Stockholm will demonstrate the greater degree of synthesis achieved by Brundtland. However, it did not mark a radical departure. Indeed, it carried forward many of the same compromises on basic norms such as sovereignty over resources. Its difference lies in how it framed the norms of international environmental governance. Two changes stand out. First, for WCED, the synthesis of environmental and developmental goals suggested that governance of both rests on a common normative foundation. Stockholm merely placed the two sets of interests side by side. Second, WCED explicitly spelled out the Keynesian-style compromise that ought to create obligations on the North for sound management and assistance, and responsibility on the South for reform. Below, the norm-complex promoted by WCED is presented with changes from Stockholm highlighted.

#### State Sovereignty and Responsibility:

1. Unchanged from Stockholm. Although a parallel legal process proposed new norms, they were never incorporated into the report nor were these proposals by a group of environmental

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<sup>103</sup>WCED 1987, 67-91.

<sup>104</sup>WCED 1987, 77-78.

experts from the North and South given serious consideration by the UNGA. When legal issues finally moved back onto the agenda in the PrepComs for the 1992 Earth Summit, this set of legal principles did not even form the basis of negotiations.<sup>105</sup>

#### Political Economy of Environment and Development:

2. The norm of differential obligations is downplayed. Instead, all states have a *common responsibility* to ensure a cleaner environment. Two imperatives apply equally to North and South:

a) Revive global growth.

b) Owing to environmental interdependence, require interdependent and shared responses to environment and development problems.

Poverty remains recognized as a source of environmental degradation in the South, and the North is seen to have an obligation to help alleviate it (through aid, and so on). However, a common program of freer and fairer trade to promote global growth combined with responsible regulation at the national level is called for in all countries. For example, developing countries have a responsibility to incorporate pollution costs into prices of pollution-intensive goods. Even the formerly taboo subject of sustainable population resurfaced in the report, albeit still in a weak form.

3. The international Keynesian-style compromise of balancing free trade with commodity price stability remains, although in more explicit terms. Free trade, and liberal economic norms generally, as the engine of growth, lies at the heart of the norm-complex. Managed interventions promote equity. (Also, see #4).

4. The argument that environmental protection requires substantial transfers of aid and technology for developing countries remains, and is followed by detailed proposals. Automatic financing, such as a tax on the use of global commons, is proposed in the spirit of the Brandt commission and the Cocoyoc Declaration.<sup>106</sup> However, WCED made clear that political constraints made the implementation of such proposals unlikely, at least in the near term.

5. The norm of cooperation to conserve and enhance the global resource base for present and future generations remains, with global growth a prerequisite.

#### Environmental Management and Decision Making:

6. Encourage a mix of command and control regulation and economic/market-based incentives for environmental management. For example, Brundtland's section on industry contained a discussion of economic instruments and recommends implementation of the Polluter Pays

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<sup>105</sup>Pallemaerts 1994, 4 and 1996, 627-629.

<sup>106</sup>UNEP 1981; and The Brandt Commission 1983, 98-100.

Principle.<sup>107</sup> Internationally, PPP is meant to reduce distortions in trade and internalize the costs of pollution in product prices. Technological differences between North and South are to be considered (but WCED contained no mechanism to prevent PPP from penalizing industries from the developing world that may rely more heavily on subsidies for pollution prevention). However, economic instruments should be considered in the context of an overall strategy that also emphasizes standard setting, environmental assessment and government regulation. In addition, environmental audits should be required for transnational corporations that operate in developing countries.

Our Common Future legitimated the trend toward liberal environmentalism when it called for the integration of environment and economics in decision making. However, the mix of management instruments and emphasis on various interventions in international markets left open a number of possibilities of how the ideas in Brundtland might eventually be institutionalized. Whereas WCED might call the norm-complex it supported “sustainable development,” a better description is “managed sustainable growth.” This will be contrasted with the liberal market environmentalism of UNCED.

### **From Brundtland to Rio**

By the late 1980s it became apparent that although Brundtland’s norms might appeal to the enlightened best intentions of the commissioners and some governments, WCED had been outpaced by the realities of the international political economy. In the North, apparent threats of protectionism continued while many Southern states faced the rigours of structural adjustment. This combination made the success of the more radical redistributive proposals of WCED unlikely. Instead, the IMF and World Bank programs to combat developing country debt began to reflect an emergent economic policy convergence, dubbed by one author the “Washington consensus.”<sup>108</sup> By this John Williamson, who originated the term, meant a consensus among the “economically influential bits of Washington, meaning the US government and the international financial institutions,” on the best course for the economic policy.<sup>109</sup> Paul Krugman suggests the members of the consensus might also include “think tanks, politically sophisticated investment

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<sup>107</sup>WCED 1987, 219-232.

<sup>108</sup>Williamson 1993.

<sup>109</sup>Williamson 1993, 1329. This should not imply that it originated in Washington. Williamson in fact cites the Latin American experience and intellectual trends there as its source.

bankers, and world finance ministers, all those who meet each other in Washington and collectively define the conventional wisdom of the moment.”<sup>110</sup> Krugman neatly summed up this ideological shift -- sometimes loosely termed neoliberal or neoclassical economics -- as “liberal trade and sound money.” The Washington consensus calls on states to liberalize trade, privatize state enterprises, balance the budget, and peg the exchange rate.<sup>111</sup>

The success of the export-oriented economies in East Asia gave ammunition to promoters of structural reform, as did investor returns in those economies. Moreover, when formerly communist states embraced the new liberal market orthodoxy, it seemed the end of the Cold War had ushered in a near universal consensus. UNCED came in the midst of the apparent success of the Washington Consensus. By the mid-1990s, the successful completion of the Uruguay round of GATT, financial deregulation, and increased efforts to liberalize regional trade all indicated that the North’s response to protectionism fit with the emergent consensus, at least on a macro level. Whether by will or by submission, these norms of global economic governance gained acceptance in North and South alike.<sup>112</sup>

The WCED and Environment 2000 process paved the way for a coinciding transition in international environmental governance. The reports turned the corner on environmental thinking that had put it in direct opposition to classical economic views of growth and development. A UNEP official summed up the environment 2000 report this way (and the same could be said for WCED):

The [Environment 2000] Perspective also wants to remove fragmentation in thinking and action on human affairs, and it wants deliberate reconciliation of social, economic, and environmental aspects of human well-being in all countries. It wants the economic mechanisms of prices, charges, taxes, subsidies, allowances, permits, and rights to supplement regulatory frameworks, to bring about compatibility between environmental and economic objectives of

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<sup>110</sup>Krugman 1995, 29.

<sup>111</sup>Krugman 1995. Others present a slightly different mix. For example, Sachs’ (1995) list includes open international trade, currency convertibility, private ownership, corporate ownership as the dominant organizational form, openness to foreign investment and membership in key international economic institutions. It should also be noted that Williamson eschews the term neoliberalism or neoconservatism to describe the consensus because such terms include a number of other policies that lack the same consensus. I thus use the term liberal economics as a useful shorthand for a general trend away from state intervention and toward deregulation of markets and investment, privatization, liberalization of trade, and use of markets as a source of resource allocation.

<sup>112</sup>Biersteker 1992.

development and private decisions, and systematic implementation of social development policies that contribute to environmental protection and improvement.<sup>113</sup>

Not only was the compatibility of growth and environmental protection cemented in international discourse, but economic instruments and market-based solutions were already perceived to be the mechanisms best able to achieve this synthesis.

By pronouncing this compatibility of growth and environmental conservation and protection, Brundtland acted as a catalyst for a series of initiatives and research projects by those who wanted to develop the means to link what they saw as sound economic thinking with environmental protection. The Economist picked up this thread immediately in an endorsement of Brundtland's potential to realistically ameliorate environmental degradation, "...if the eco-lobby could digest one of the study's least-trumpeted implications -- namely that in most of the world economic growth and environmental protection go happily hand in hand."<sup>114</sup> The prescription was obvious in The Economist's eyes -- privatize the commons, create efficient markets for resources, and free capital markets for investment and lending:

That is where the rich countries and their lending agencies should come in. With the right incentives in place, they need not worry about the clash between growth and the environment. The World Bank and the IMF will be doing the environment a favour when they insist on freer markets in exchange for their money.<sup>115</sup>

Sustainable development, in this view, found no contradiction with the neoclassical turn in international economic governance.

The World Bank quickly picked up on this theme with a series of reforms begun in 1987. The reforms provide a logical starting point for an analysis of the direction of international environmental governance following WCED. The Bank's privileged position as a funnel for wealthy states' development funds, and especially concessional lending, along with the IMF, meant regional and commercial banks often mirrored its development policies. Thus the Bank is generally recognized as the premiere international development institution. Furthermore, the so-

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<sup>113</sup>Dabholkar 1989, 53.

<sup>114</sup>The Economist 1987.

<sup>115</sup>The Economist 1987, 16.

called greening of Bank policies not only produced a change in its lending practices, but presaged a major foray into global environmental management that successfully culminated in its senior partner role in the new Global Environmental Facility or GEF.<sup>116</sup> Established in 1991 in partnership with the UNDP and UNEP, the GEF is now the main multilateral source of funding for major global environmental agreements and for disbursing monies attached to initiatives agreed to at the 1992 Earth Summit.<sup>117</sup>

An examination of the Bank requires sensitivity to its two-way relationship with environmental governance. On the one hand, Bank officials have made concerted efforts to reform the institution to make it more sensitive to the environmental consequences of its loans.<sup>118</sup> On the other hand, the Bank has played an active role in framing the norms of environmental governance.

The Bank generated the most publicity with its internal reforms, probably because of the intensity, volume, and sophistication of the criticism in the 1980s that presaged change. Those criticisms came not only from prominent NGOs and grassroots organizations in developing countries, but from public pressure in industrial shareholder nations on which the Bank depended for its capital. In particular, the U.S. Congress held over twenty formal hearings on the Bank's environmental policy. U.S. concern culminated in its refusal to support a Brazilian power-sector loan in 1986, the first time it had voted on environmental grounds.<sup>119</sup> Bank staff had also started to notice that serious environmental degradation had begun to constrain development and undermine Bank projects, and evidence mounted that loans in many cases had themselves caused major environmental disasters. Although it hired its first (and at the time only) environmental advisor in 1970, significant reform waited until 1987 when the then new president, Barber Conable, made a well-publicized speech on May 5 at the World Resource Institute in Washington. He announced a major reorganization of the Bank, including the augmentation of the one weak environmental division into four regional divisions and one central department.

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<sup>116</sup>World Bank, UNDP, and UNEP 1992.

<sup>117</sup>Jordan 1994b. See also Fairman 1994 for evaluations of GEF performance.

<sup>118</sup>See World Bank 1990 and later reports in the same series.

<sup>119</sup>Goodland 1992, 11; and Rich 1994, 136-138.

That meant a sixteenfold increase in environmental staff, to about 100 people. Then, in 1989, the Bank adopted an environmental assessment umbrella policy.<sup>120</sup> Reforms continued, including the August 1994 initiation of a new inspection panel which allows affected parties to launch reviews of whether the Bank follows its own policies, procedures and loan conditions.<sup>121</sup> Although environmentalists and Bank officials may disagree on the effectiveness of such reforms, the monitoring and assessment of environmental consequences has clearly increased and some movement has been made to include environmental considerations into assessments of project viability and impact.

Nonetheless, the second aspect of World Bank activities -- the promotion and implementation of environmental norms -- is where the Bank is likely to have the broadest impact. The most accessible and widely distributed statement of that policy can be found in the influential 1992 World Development Report, the theme of which was environment and development.<sup>122</sup> Like the Brundtland Commission, the World Development Report argued that economic growth is the necessary condition for achieving other ends, including environmental protection and poverty reduction. The report projected a 3.5 times increase in world output between 1990 and 2030, and then argued that economic growth could be achieved without environmental deterioration, provided proper policies are in place. Proper policies, the report argued, are those consistent with goals prescribed in previous development reports, namely "market-friendly" policies for development.<sup>123</sup>

Hence the Bank's four-pronged program for "sustained development" (its preferred term because it narrows Brundtland's definition to "rising and sustainable levels of welfare")<sup>124</sup> began with two policies specifically aimed at market liberalization: first, "Removing subsidies that

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<sup>120</sup>Goodland 1992, 10-12; and Rich 1990 and 1994, 145-181.

<sup>121</sup>Hunter and Udall 1994.

<sup>122</sup>World Bank 1992b.

<sup>123</sup>World Bank 1992b, 9-10.

<sup>124</sup>World Bank 1992b, 8, argued "there is no difference between the goals of development policy and appropriate environmental protection. Both must be designed to improve welfare." And, it sums up the rationale for its narrower definition as follows: "Basing developmental and environmental policies on a comparison of benefits and costs and on careful macroeconomic analysis will strengthen environmental protection and lead to rising and sustainable levels of welfare."

encourage excessive use of fossil fuels, irrigation water, and pesticides and excessive logging;” and, second, “Clarifying rights to manage and own land, forests, and fisheries.” These two policies essentially supported the Polluter Pays Principle in that they attempted to internalize environmental costs by eliminating subsidies and clarifying property rights. The final two planks focused on establishing social conditions conducive to such reforms. The third plank promoted an acceleration of the provision of basic needs such as drinking water, sanitation, education (especially for girls), family planning, and agricultural extension, credit, and research. Finally, greater participation in development decision making at the community level was supported. It should be noted that the Bank argued that even the provision of basic services could be best achieved by assigning property rights and other market reforms, which are presumed to limit pollution better than either common access or ownership regimes, or command and control regulations. “Market-based instruments are best in principle and often in practice,” the report argued, to change environmentally damaging behaviour.<sup>125</sup>

Bank insiders echoed this general interpretation. For example, former director of the Environment and an author of the report, Kenneth Piddington, called environmental economics and proper valuation “the decisive element in the Bank’s overall approach.”<sup>126</sup> Similarly, Mohamed T. El-Ashry, another former Environment Director and also Chairman of GEF, traced environmental degradation largely to inadequate property rights, subsidies for scarce resources such as water and polluting products such as pesticides, and other causes laid out above. On a macro level, he also called for the liberalization of trade and investment.<sup>127</sup> Post-1992 World Bank environment reports continued to demonstrate an emphasis on the same liberal economic norms.<sup>128</sup>

While WCED did not cause these changes in the Bank, it did play an important normative role. Our Common Future legitimated a form of international governance consistent with the Bank’s general development philosophy -- an emphasis on export-led growth, open markets, and

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<sup>125</sup>World Bank 1992b, 2-3, 10-14.

<sup>126</sup>Piddington 1992, 222.

<sup>127</sup>El-Ashry 1993.

<sup>128</sup>For example, World Bank 1994.



domestic liberalization -- while it also provided an opportunity for a response to environmental criticisms of its lending policies. WCED legitimated what former Bank president Lewis Preston called the “win-win” strategy -- a phrase that appeared repeatedly in the 1992 report -- that the Bank adopted. In essence, that strategy meant the “links between efficient income growth and the environment need to be aggressively exploited.”<sup>129</sup>

Other responses, particularly in the North, followed this general interpretation. One important example was a report for the Trilateral Commission, authored by the Secretary-General of WCED and former OECD environment head Jim MacNeill, that had the necessity of growth at its core.<sup>130</sup> To make growth sustainable, the authors emphasized the WCED position that environment and economics “must be integrated in all of our major institutions of decision-making -- government, industry and the home.” Sustainability was defined accordingly, as “the maintenance of a community’s or a nation’s basic stock of natural capital.”<sup>131</sup> The framing of environmental problems in economic language was typical of post-WCED proposals. According to this view, environmental problems stem from distortions in markets, so solutions require a better application of economic principles:

If nations are to stop depleting their basic stocks of ecological capital, governments will need to reform those public policies that now actively encourage the infamous *des*: *deforestation*, *desertification*, *destruction of habitat and species*, *decline of air and water quality*. Virtually all governments today pay lip service to the market, and then they intervene to distort it in ways they find politically convenient. Subsidies, tax abatements, fiscal incentives, price supports, tariffs, and trade quotas of all kinds can distort prices and trading patterns in ways that are economically perverse and encourage unsustainable forms of development. They often rig the market not only against the economy, but also against the environment and, ultimately, against development itself.<sup>132</sup>

Thus, adapting markets to reflect the cost of natural capital depletion -- in other words, getting prices right -- should be the basis of development policy to avoid the above distortions.

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<sup>129</sup>Preston in World Bank 1992, iii.

<sup>130</sup>MacNeill, Winsemius, and Yakushiji 1991. Although it cannot be considered official Trilateral Commission policy, it was presented to the Commission and was its main public response to Brundtland.

<sup>131</sup>MacNeill, Winsemius, and Yakushiji 1991, 20-22.

<sup>132</sup>MacNeill, Winsemius, and Yakushiji 1991, 23.

Domestically, reforms might include an elimination of subsidies in the agricultural, forestry, energy and transport sectors. These market distorting measures should be replaced by economic instruments such as environmental taxes to create new market incentives to preserve and enhance natural resources under threat. Other reforms might include an extension of property rights to common resources, that is, to privatize commons such as the atmosphere or oceans. The proposals included tradeable emission permits, water rights, and systems of deposits and refunds on hazardous or recyclable wastes. The Polluter Pays Principle was the guiding norm behind such proposals.<sup>133</sup>

A number of OECD initiatives during this period gave added analytical ammunition and generated political support for the promotion of economic instruments for environmental management. MacNeill's 1984 "Environment and Economics" conference, noted above, provided the foundations for later projects on this theme. Following 1987, these projects gained greater legitimacy as they were then seen to fit with the thrust of the more widely accepted vision articulated in the WCED report. In 1991 the OECD Council endorsed a major project on economic instruments at the behest of its environment committee.<sup>134</sup> The Council proposed, *inter alia*:

- a greater and more consistent use of economic instruments;
- to improve the allocation and efficient use of natural and environmental resources by means of economic instruments to better reflect the social costs of using these resources; and
- to seek further agreement at [the] international level on using economic instruments with respect to solving regional or global problems and to ensuring sustainable development<sup>135</sup>

The OECD report that stemmed from these proposals specifically referred to the Brundtland Report as a legitimating source for an interpretation of sustainable development consistent with the recommendations: "The way the notion [sustainable development] was interpreted in the [Brundtland] report implied an enhanced role for environmental economics in actual policy." It

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<sup>133</sup>MacNeill, Winsemius, and Yakushiji 1991, 32-42.

<sup>134</sup>For a brief history of OECD activities, see OECD 1994a, 11-25.

<sup>135</sup>OECD Council (C(90)177/final) reprinted in OECD 1994a, 11.

went on to highlight Brundtland's central theme of combining economic and environmental decision making and the explicit advocacy of economic instruments for sustainable industrial development. In addition, the OECD report noted a number of other conferences and declarations that emphasized the usefulness of economic instruments. They included the Lankawi Declaration on Environment of the Commonwealth Heads of Government (Kuala Lumpur, Oct. 1989), the Bergen Ministerial Declaration on Sustainable Development in the ECE Region (May 1990), the Conference on Environment and development in Asia and the Pacific (Bangkok, Oct. 1990), the Ministerial Declaration of the Second World Climate Conference (Geneva, Nov. 1990), and the Second World Industry Conference on Environmental Management (Rotterdam, April 1991).<sup>136</sup> As I will show below, UNCED further cemented this interpretation and the OECD continues to use the Rio Declaration (Principle 16 in particular) and Agenda 21 chapter 8 as the source of legitimacy for the pursuit of such policies.

The OECD report itself went further than simply endorsing economic instruments, which might include any instrument that affects estimates of the costs and benefits of alternative actions open to economic agents. It favoured instruments more consistent with liberal market principles. So, for example, it did not include subsidies in the study since they contravene the Polluter Pays Principle.

Finally, the OECD report argued that the anarchical nature of the international system makes the case for market-based instruments at this level even stronger. In other words, the lack of a world government or strong set of regulatory institutions makes market incentives and instruments more likely to succeed than those that require strict standards and enforcement. The reason economic instruments may succeed is not because they are necessarily better at enforcing compliance, but because they are more likely to even out costs and benefits or provide economic incentives for reluctant parties. Thus the argument for economic instruments was made as much on the basis of efficiency as effectiveness. Such international instruments might include emission or energy use charges or taxes, internationally tradeable emission permits, and "joint implementation" programs.<sup>137</sup>

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<sup>136</sup>OECD 1994a, 13.

<sup>137</sup>OECD 1994a, 147-151.

The latter appears to have gained a strong foothold in implementation of the Framework Convention on Climate Change (FCCC). Simply put, joint implementation ideally involves, for example, a state co-financing a project in another state to reduce carbon dioxide emissions.<sup>138</sup> The reduction would be counted as part of the target for the funding state. The principle at work is similar to that of tradeable permits, where abatement would occur where it is cheapest to do so. Tradeable permits have not yet seen wide use in the international sphere, but are already enabled in the Montreal Protocol treaty for ozone protection which permits international exchange of CFC quotas. Joint implementation in the climate change convention can be seen as a second-best option to such a system which has a tradeable permit system as its ideal culmination.

This shift in norms was also evident in attempts at policy coordination among the Group of Seven industrial nations (G-7). Although the G-7 at first showed a willingness to accept the Keynesian-style compromise of Brundtland, later it too moved toward a position consistent with MacNeill et al. and the OECD. Interestingly, prior to Brundtland, the G-7 took a position virtually identical to that outlined in the OECD Environment and Economics conference noted above. In the Economic Declaration at the 1985 Bonn Summit, G-7 countries agreed that, "We shall harness both the mechanisms of governmental vigilance and the disciplines of the market to solve environmental problems. We shall develop and apply the "polluter pays" principle more widely."<sup>139</sup> Hence, its later support for the more interventionist style of Brundtland does mark at least a formal shift in policy. That shift appeared in 1988 when the G-7 for the first time endorsed the concept of sustainable development at the Toronto summit.<sup>140</sup>

It took until 1989 for an interpretation of sustainable development to appear as well as a coordinated response to it. The Paris Economic Declaration appeared to endorse many of Brundtland's proposals and included language that mirrored that in *Our Common Future*. For

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<sup>138</sup>At the time of writing, the final status of joint implementation initiatives in the FCCC remains uncertain. The first Conference of the Parties (COP I) endorsed a pilot phase for "activities to be implemented jointly," but subsequent negotiations remain inconclusive on a variety of contentious issues, including pollution credits. At COP II (July 1996, Geneva) the U.S. linked support for a binding protocol to the FCCC on institutionalization of mechanisms such as JI or a tradeable permit system. The most recent agreement on "activities to be implemented jointly" is FCCC/CP/1995/L.14. For summaries of COP I and COP II see Rowlands 1995b and Harrison 1996, respectively. See the latest issues of *Earth Negotiations Bulletin*, v. 12, for updates since then.

<sup>139</sup>"Bonn Economic Declaration" in Hajnal 1989, 293.

<sup>140</sup>"Toronto Economic Summit Declaration: Environment," in Hajnal 1989, 372.

example, the G-7 declaration used the language of “common goals” to preserve “a healthy and balanced environment in order to meet shared economic and social objectives and to carry out obligations to future generations.”<sup>141</sup> A number of the norms mentioned above were voiced there as well. For example, it contained statements on the compatibility of economic growth and the environment, the mix of market and regulatory actions, and, significantly for a comparison with later policy, a cautious endorsement of the use of “aid mechanisms and specific transfer of technology” to “help developing countries deal with past damage and to encourage them to take environmentally desirable action.”<sup>142</sup> However, the trend toward integration of environment and economics along liberal market lines was also present. For example, it called for the OECD and United Nations and affiliate organizations to develop techniques to further the use of economic instruments for environmental protection.

By 1990, summit statements had moved toward a stronger support of market mechanisms and away from international aid and domestic regulatory approaches. While environmental problems such as ozone depletion, deforestation, climate change and marine pollution were recognized, the G-7 argued in Houston that the key to a healthier environment was the recognition that, “strong, growing, market-oriented economies provide the best means for successful environmental protection.”<sup>143</sup> The Houston Declaration did not ignore aid and technology transfer completely, but it gave special emphasis to the OECD’s work on environment and economics. It also singled out “market-oriented approaches” as an important area for research on how best to achieve environmental objectives.

Many individual countries have also either sponsored their own programs to formulate strategies that fit with liberal environmentalism or have responded positively to policy proposals along those lines. Two prominent examples are the United States and the United Kingdom. As has been noted, the U.S. administration under Ronald Reagan apparently saw little or no contradiction between environmental protection and the free market. Although actual implementation of such policies was slow (it was not until the Bush administration that serious

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<sup>141</sup>“Paris Economic Declaration,” in Hajnal 1989, 400.

<sup>142</sup>Ibid., p. 401.

<sup>143</sup>“Houston Economic Declaration,” in Hajnal 1991, 21.

policy attention turned to market-based incentives for environmental protection), in principle Reagan furthered a trend begun in previous administrations to look for economic incentives and use cost-benefit analysis as guiding principles. The most prominent of such measures came in the Clean Air Act and subsequent refinements in the 1970s which pioneered the application of air pollution permits to control emissions from U.S. industry. The new Clean Air Act of 1990 expanded this system to include, for example, a permit system for sulphur dioxide emissions that contribute to acid rain. The impetus for the latter reforms came largely from the “Project 88: Harnessing Market Forces to Protect our Environment” initiative of Senators Timothy Wirth (Democrat) of Colorado and John Heinz (Republican) of Pennsylvania, a project headed by Harvard economist Robert Stavins. The project, which was influenced also by work from the Environmental Defense Fund, argued that market-based incentives provided a cheaper, less intrusive alternative to command-and-control regulation for environmental protection.<sup>144</sup> It was presented at the 1988 Republican Convention in New Orleans, and influenced policy during the Bush presidency.

The same people behind Project 88 have strong ties to the Bill Clinton White House. For example, Stavins participated in work for the new Progressive Policy Institute (PPI) think tank. PPI was a project of the Democratic Leadership Council, an organization Clinton helped to create and which he headed from March 1990 to August 1991. The environmental section of PPI’s major policy document, Mandate for Change, emphasized “free market” ideology, and Stavins detailed there and elsewhere specific proposals that all fall under the rubric of the Polluter Pays Principle.<sup>145</sup> Specific proposals from PPI included pollution charges, deposit-refund systems, and tradeable pollution permits. Recent reforms within the Environmental Protection Agency, the general policy direction of the Clinton administration, and the public position of Vice-President Al Gore all suggest these trends have been entrenched during the Clinton presidency.<sup>146</sup> In addition, Clinton’s appointment of Wirth to the newly created position of Under Secretary of State for Global Affairs, responsible for international environmental issues, signalled a

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<sup>144</sup>Project 88 1988 and Project 88 -- Phase II 1991. See also *The Economist* 1988, 1991.

<sup>145</sup>Stavins and Grumbly 1993; Stavins and Whitehead 1992; and Hahn and Stavins 1992.

<sup>146</sup>For an overview of recent trends in U.S. environmental policy see Vig and Kraft 1994b. For a brief summary of the U.S. experience with economic instruments, see OECD 1994a and 1994b, 295-298; and Ingham 1994.

continuation of strong U.S. support for market-mechanisms in international governance. Wirth, for example, in a second Project 88 report, argued for a tradeable pollution permit system to combat global warming and pushed U.S. policy in this direction.<sup>147</sup>

In the United Kingdom, the work of economist David Pearce and his colleagues on market-based mechanisms to promote sustainable development has received wide attention.<sup>148</sup> Thatcher's environment minister Chris Patten championed Pearce's ideas and in 1989 Pearce et al. published Blueprint for a Green Economy, commissioned by the UK Department of the Environment, which endorsed market-based instruments over traditional standard setting (command and control).<sup>149</sup> The arguments used in the study to support his position include the following: such instruments keep down the cost of compliance because the market ensures that those most able to afford to act do so; they act as an irritant to polluters who thus avoid them by creating cleaner technology; and they encourage consumers to choose cleaner products by raising the cost of polluting products. Pearce remains an influential figure and has published a number of studies that extend his argument from a single economy to the world economy and the developing world in particular. He argues, for example, that his approach is even more important in the international context because of the potentially huge cost of protecting the global commons.<sup>150</sup> Internationally, Pearce and his colleagues' influence can be seen in his reports for institutions such as the World Bank and for the Intergovernmental Panel on Climate Change, the scientific research body on which the Framework Convention on Climate Change is supposed to base its activities and further development.<sup>151</sup> As one of the lead authors of the report from working group three, on the economic and social implications of climate change, Pearce and his colleagues have had a major influence on the shape of the policy debate on climate change, a development I discuss in more detail in later chapters.

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<sup>147</sup>Project 88 – Round II 1991, and author's interview.

<sup>148</sup>Thomas 1992, 73-78.

<sup>149</sup>Pearce et al. 1989.

<sup>150</sup>Pearce 1991 and 1993.

<sup>151</sup>OECD 1994b; and IPCC Second Assessment Report 1995.

A basic assumption that the conditions of property rights are at the root of many environmental problems underlies Pearce's writing. As he and others (he is one of four authors) noted in a recent OECD study on project and policy appraisal, "Many environmental problems arise because these conditions [of private property rights] do not prevail." Those conditions include (a) universality -- all resources privately owned and entitlements are completely specified; (b) exclusivity -- all benefits and costs of resources accrue to the owner; (c) transferability -- owners must be able to transfer property rights to other owners in voluntary exchange; and (d) enforceability -- a structure of penalties to keep property from being encroached upon by others.<sup>152</sup> Meeting such conditions, the authors argued, results in win-win solutions to environmental problems. To ensure that capital stocks do not run down (the core of sustainability for Pearce) economic development is an "enabling" condition, thus the core of sustainable development. Creating and enforcing private property rights and using market-based incentives to protect the environment therefore lie at the heart of any strategy for sustainable development for Pearce.

A wide variety of countries initiated, or lent government support, to similar programs during the period between Brundtland and Rio, including Australia, Canada, Poland, (then) Czechoslovakia, the former Soviet Union, Belgium, Italy, and a number of other European countries.<sup>153</sup> These domestic programs combined with the already mentioned EU trend toward liberal market norms gives a strong indication of how sustainable development following Brundtland had been interpreted, at least in the North. In the case of the European Community (and then the EU) UNCED reinforced this commitment, as evidenced in the fifth environmental action programme, which places a heavy emphasis on moving from regulatory measures to, "in particular, the greater use of market forces."<sup>154</sup> It is not surprising, then, that consensus on the direction of international environmental policy was pulled in a similar direction at UNCED. It

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<sup>152</sup>OECD 1994b, 10-12. The authors pointed out the common property (as opposed to open access) as well as private property regimes may fulfil all four criteria. However, they favoured private property since common property regimes, they argued, have a tendency to break down.

<sup>153</sup>Project 88 – Round II 1991, 2-4; Moffatt 1996.

<sup>154</sup>Commission of the European Communities 1993, 49.



not only cemented this interpretation of sustainable development, but gave it international political legitimacy.

### **United Nations Conference on Environment and Development (UNCED)<sup>155</sup>**

The United Nations Conference on Environment and Development arguably evolved as a natural progression from the Brundtland report and domestic and international reforms that followed it. However, the agreements UNCED produced also reflected an inherently political process that Brundtland had more or less avoided. The nature of United Nations multilateral diplomacy ensured that long unresolved tensions left over from Stockholm would resurface at UNCED, which at times appeared to move U.N. diplomacy backward to the North-South stalemate of the 1970s. Not surprisingly, then, the negotiations exhibited some parallels to the Stockholm conference. For example, North and South disagreed on the degree to which the North, as the historical site of greater pollution, ought to therefore shoulder a greater financial burden for environmental preservation now. They also disagreed on topics such as the relative weight that should be given to issues such as consumption patterns versus population growth, or the need to undertake a broader set of development reforms before the South could be expected to act on global environmental concerns.

Nonetheless, numerous changes since 1972 made a stalemate unlikely. Although tensions remained, delegates overcame many North-South tensions to forge a consensus on a relatively well-specified approach to international environmental governance. I have already detailed some of the more important post-Stockholm changes, such as the increased profile of environmental concerns in the United Nations system and other international fora. Changes in the attitudes and understandings among Southern leaders and within Southern coalitions about global environmental problems also made a repeat of Stockholm unlikely. For example, by 1992 most states in the South saw the environment as an important national and international issue: many had national environmental agencies or ministries;<sup>156</sup> saw a link between poverty and

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<sup>155</sup>For succinct summaries of the agreements and negotiations see Grubb et al 1993. For full texts and preparatory documents see IDRC 1993. All references to United Nations and other official documents are from this source unless otherwise referenced.

<sup>156</sup>In 1992, about 115 countries had environmental ministries or agencies compared with 11 in 1972. Imber 1993; Rogers 1993.

environmental degradation; and accepted studies by UNEP, the World Bank and other governmental and non-governmental organizations that environmental problems such as deforestation, water pollution, or soil erosion harmed the development process.<sup>157</sup>

These understandings were not confined to elites. By the early 1990s, non-elite opinion in the South also reflected a high level of concern over local, national, and international environmental conditions. Although time series data for the South are not available, a 1992 survey of 24 countries representative of most regions of the world provides a snapshot of attitudes and opinions. Contrary to conventional wisdom, the survey shows little difference between people in wealthy and poorer countries in their concerns over environmental problems.<sup>158</sup> For example, the percentage of respondents who said the environment was a “very serious” problem in their country was 67 per cent in Germany, 42 per cent in Japan, and 21 per cent in Finland (the highest, middle, and lowest ranked countries in the developed world). Respondents in the South gave the same responses in comparable proportions, with 67 per cent ranking the environment a “very serious” problem in South Korea, 56 per cent in Chile, and 37 per cent in the Philippines (the highest, middle, and lowest ranked in the developing world). Answers to a wide variety of other questions indicate similarly comparable patterns in North and South. The responses suggest that environmental issues had penetrated public concern and were considered major issues relative to other core economic and social concerns such as employment or health care. Furthermore, majorities in most developed *and* developing countries were willing to forego some economic growth in order to decrease environmental degradation. On the latter point, pollsters found only small differences between developed and developing countries as a whole. The concern among non-elites in the South was further evidenced by the large-scale

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<sup>157</sup>Williams 1993.

<sup>158</sup>Dunlap, Gallup, Jr. and Gallup 1993. The authors admit that poorer, less economically developed nations, especially in Africa, are underrepresented, although the survey is the most comprehensive of its kind to date. The following is a list of countries surveyed organized by region: North America – Canada, United States; Latin America – Brazil, Chile, Mexico, Uruguay; East Asia – Japan, South Korea, Philippines; Other Asia – India, Turkey; Eastern Europe – Hungary, Poland, Russia; Scandinavia – Denmark, Finland, Norway; Other Europe – Germany, Great Britain, Ireland, Netherlands, Portugal, Switzerland; Africa – Nigeria. Less comprehensive surveys have been conducted. For example, Weale 1992, 25, notes that a Harris polling organization survey conducted in 1988-89 in 15 countries in all parts of the world found that leaders and publics in all but one (Saudi Arabia) thought that the environment had become worse in the previous decade.

participation of Southern NGOs at the Earth Summit and parallel Global Forum.<sup>159</sup>

Although a number of factors likely produced the high levels of public awareness, a series of spectacular international environmental disasters in the 1980s certainly increased public anxiety in the lead-up to UNCED (as they had for Stockholm) and increased pressure for international cooperation. The escape of toxic gas at a Union Carbide plant in Bhopal, India (1984), the Chernobyl nuclear accident in the Ukraine (1986), and the Exxon Valdez oil spill (1989) off the coast of Alaska provided vivid examples of how even single environmental disasters could have international repercussions. Big international issues such as ozone depletion had received serious attention by governments, and other global concerns such as tropical deforestation (particularly of rainforests) and biodiversity had also started to gain greater prominence in the public eye. In addition, the hot summer of 1988 in North America galvanized concern over the prospect of climate change and created grass-roots momentum that ensured Rio would not just be another U.N. conference.<sup>160</sup>

As for the other half of the UNCED agenda, 20 years after Stockholm the North did not need convincing that development deserved a prominent place at Rio. Since UNCED originated as a Brundtland Commission proposal, development received equal billing on the agenda from the initial UNGA resolution calling for an international conference on environment *and* development. In addition, the links between environment and development were well established within the United Nations system. Existing institutional arrangements to deal with global environmental problems mostly accepted the linkage and, to varying degrees, had incorporated the linkage into their programs. Although some distrust between North and South remained, the changes since Stockholm meant a Founex would not be required: unlike in 1972, the conference secretariat did not need to devote its time and energy to merely try to convince developing countries to participate or to acknowledge that the global environment was an issue worthy of an international response. Rather, substantive negotiations focused on the division of responsibilities, rights and obligations in regard to global environmental action, the means of

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<sup>159</sup>Parson, Haas, and Levy 1993 estimate that about 1/3 of the approximately 1400 NGOs accredited at the conference (as opposed to the parallel non-governmental Global Forum) were from the developing world. See also Doherty 1994. Estimates range widely on the actual number of environmental NGOs in existence in the South.

<sup>160</sup>For a summary of these and other pressures in the lead-up to UNCED see Brenton 1994, 125-162.

taking action and type of action required, and the source of financial and technical resources to make action possible.

The larger political context of the Cold War's end also created an opportunity for environment and development issues to get a serious hearing. A new optimism prevailed around the ability of states to cooperate to solve global problems previously unable to compete for attention on the international diplomatic agenda. The combination of environment and development (and perhaps democracy and human rights which Rio only addressed tangentially) epitomized the alternative international agenda so long buried under the preoccupation with superpower conflict. Rio represented not only an airing of those concerns, but a chance to show the new face of multilateral diplomacy and global cooperation. An open, market-friendly international economic system and a peaceful, multilateral political system were to be the cornerstones of the post-Cold War international order. This context meant the organizers of UNCED saw in it an opportunity to make a fundamental statement on global governance, not just concerning the environment, but on how planetary affairs ought to be managed. Whereas social welfare and human rights summits of the 1990s, important as they were, seemed aimed at promoting fairer governance within states and setting universal standards and programs, the linkage of environment and development -- and the concept of sustainable development that promoted that linkage -- seemed the most direct challenge to human activity on a global scale and a fine focus for the new global order. It addressed the core challenge to the international political economy as rich or poor, North or South, strong or weak would have to face the same repercussions.

The Earth Summit even put forward a new notion of planetary security. From his opening speech at the first PrepCom, Maurice Strong stated the linkage clearly:

People and nations have always been willing to accord highest priority to meeting threats to their security. In this case the security of our planet and our species is at risk. Surely this must be seen as the ultimate security risk which calls for the ultimate security alliance.<sup>161</sup>

World leaders, policy makers and academics -- including former Soviet leader Mikhail Gorbachev and U.S. Vice-President Al Gore -- have since promoted this broadened notion of

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<sup>161</sup>Quoted in Speth 1990, 41.

security that became popular immediately following the end of the Cold War.<sup>162</sup> These factors combined to elevate UNCED's importance in a way that may seem naively optimistic today, but ensured from the start that the Earth Summit would be much more than an environmental conference like Stockholm.

To say, then, that UNCED resulted merely from a North-South compromise, misses this political and economic context. It also misses 20 years of "learning" within international institutions, governments, and societal groups. From these changes in practices and discourses around the environment and development, the final compromises drew their substance, legitimacy and support. Thus the results of the Earth Summit were both evolutionary and revolutionary: they evolved from ideas most clearly voiced in the Brundtland Commission and were forged by a political process that reproduced that learning process at the level of governmental negotiations. The end point reached, however, appeared revolutionary to the degree that it finally entrenched the shift in norms from a juxtaposition of environmental protection and development to the compromise of liberal environmentalism.

Much has already been written about the Earth Summit from a variety of perspectives.<sup>163</sup> Hence I will not try to summarize the proceedings which involved thousands of official delegates from governments and NGOs, thousands of additional NGOs from a variety of backgrounds at the parallel Global Forum, and a huge and wide-ranging agenda that took shape over two and half years and dozens if not hundreds of official and unofficial gatherings from the time the United Nations called for a conference in 1989. Like the section above on Stockholm, the discussion below will concentrate closely on the official preparations and negotiations and look mainly at how ideas eventually meshed into the normative framework -- the norm-complex -- agreed to at Rio. The most attention will be paid to negotiations over the Rio Declaration and Agenda 21, although some reference will be made to other treaties where core issues were hashed

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<sup>162</sup>A large number of books, articles and speeches since about 1989 have supported the broadening of the security concept and particularly the notion of environmental security and/or the link between national security and the environment. For a relatively recent summary of arguments on this topic, see Woodrow Wilson Center 1996.

<sup>163</sup>For example, Rogers 1993; Chatterjee and Finger 1994; Grubb et al. 1993; Spector et al. 1994; Imber 1993; Campiglio et al. 1994; and Colorado Journal of International Environmental Law and Policy 1993. A large number of book chapters and journal articles also discuss the conference and its various outcomes. The best succinct summary is Haas, Parson and Levy 1992. Daily coverage of negotiations during preparations and the summit can be found in the Earth Summit Bulletin (which, following UNCED, became the Earth Negotiations Bulletin).

out by the delegates. Subsequent chapters will examine in more detail the source of ideas that dominated UNCED and why those ideas became institutionalized as norms.

### *The Conference and Normative Context*

The Earth Summit, held from 3-14 June 1992, brought together 178 states, over 100 of those represented by heads of state, 1420 accredited NGOs<sup>164</sup> at the conference, and another 8000 NGOs at the Global Forum, held nearby to coincide with the official conference.<sup>165</sup> Major conference outcomes included the Rio Declaration on Environment and Development, the detailed 40-chapter action plan of Agenda 21, and the non-binding statement of Forest Principles.<sup>166</sup> Two major environmental treaties were also opened for signature at Rio, but were negotiated in separate processes. The Framework Convention on Climate Change was negotiated by an Intergovernmental Negotiating Committee established by a resolution of the UNGA beginning in 1990. (A detailed description of the scientific origins of the FCCC can be found in the next chapter.) The Convention on Biological Diversity was negotiated starting in 1989 by an *ad hoc* working group of experts mandated by UNEP's governing council, although negotiations were open to states not on the governing council. In 1991 the negotiating group was renamed the Intergovernmental Negotiating Committee. UNCED also established a new institution, the UN Commission on Sustainable Development, to oversee the implementation of Agenda 21.

The proposal for a global conference on environment and development came directly from a recommendation by the Brundtland Commission. Thus, the 22 December 1989 General Assembly resolution 44/228 calling for a global conference explicitly linked environment and development under the concept of sustainable development. Not surprisingly, the resolution itself contained some vague wording that stemmed from uneasy compromises between North and South and those conflicts pervaded much of the conference process. For example, countries from the North primarily pushed for a global conference on the environment to coincide with the 20th

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<sup>164</sup>This includes not just environmental groups, but industry groups, scientific organizations, and so on.

<sup>165</sup>Some discrepancy exists in various reliable sources on the exact number of heads of states who attended (IDRC 1993 lists 104 speeches by heads of state) and NGOs at the Global Forum. The estimates are the most commonly cited.

<sup>166</sup>The full title is the "Non-Legally Binding Authoritative Statement of Principles For a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests."

anniversary of Stockholm, while many countries from the South feared that such a conference would have a strong environmental (Northern) bias and not focus enough on development concerns.<sup>167</sup> Nonetheless, a year after the General Assembly first considered the idea, states agreed on resolution 44/228, in effect recognizing that environment and development had become inexorably linked when it came to addressing environmental problems on a global scale.

The final wording thus called for a global conference that “should elaborate strategies and measures to halt and reverse the effects of environmental degradation in the context of increased national and international efforts to promote sustainable and environmentally sound development in all countries.”<sup>168</sup> In terms of the evolution of environmental governance, the question the conference would answer is what formulation of sustainable development would prevail.

One sign of that direction was the absence of the qualifier in the resolution -- “environmentally sound” -- in the conference outcomes. According to Pallemarts, the modifier was added in the first place because the remainder of the resolution largely supported the status quo of the international economic system, thus supported economic growth as the major concern. He argues that the drafters of the resolution were not convinced that ecological concerns would automatically be incorporated by the concept of sustainable development unless texts explicitly recognized their importance. Those concerns proved prescient as UNCED outcomes were more definite on the promotion of a liberal and growth oriented economic order and less so on ensuring ecological viability.<sup>169</sup> The form of governance that emerged from UNCED emphasized one particular pathway from the concept of “sustainable development” to produce a set of norms that legitimated the compatibility of liberal economics and environmental protection. The formulation in the Brundtland commission did not determine this path of governance outright, but its emphasis on growth legitimated the linkage of environmental concern to liberal economics and helped de-legitimate forms of governance that might be seen in opposition to leading economic principles that did encourage growth.

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<sup>167</sup>Chasek 1994b, 46.

<sup>168</sup>United Nations 1989.

<sup>169</sup>Pallemarts 1994, 15.

Whereas the post-Cold War political context probably facilitated cooperation generally, the shift in international economic governance toward the liberal orthodoxy of the “Washington consensus,” and its widespread support, influenced the direction that cooperation was likely to take.<sup>170</sup> In contrast to analysts who contend that the market, reinforced by this post-cold war triumph of liberal market based economics, marks a challenge to environmental governance, I argue that UNCED embraced and even anticipated the new orthodoxy in its formulation of norms of international environmental governance.<sup>171</sup>

To take one important example of the normative shift, the decline in legitimacy of the “Common Heritage of Mankind” (CHOM) principle can be contrasted to the successful entrenchment of the Polluter Pays Principle (PPP) by UNCED. The former proposed that areas not under any state’s jurisdiction be subject to common property ownership and shared economic use.<sup>172</sup> It originally gained prominence in the negotiations for the 1982 U.N. Convention on the Law of the Sea (UNCLOS III), but also appeared in slightly altered form in the Outer Space Treaty of 1967 and Moon Treaty of 1979.<sup>173</sup> However, by 1992 it had fallen out of favour in international fora that addressed problems of regulating the global commons and environmental issues in general.

As an illustration, a complete search of UNCED documents reveals that CHOM did not appear in any of the agreements reached, not even in Agenda 21. CHOM was mentioned briefly in opening or closing statements of only 10 states (of 178 that attended) or international organizations and a handful of regional reports. Of those, only three states (Portugal, Kenya and Jamaica) mentioned its specific application, referring to the Law of the Sea and Outer Space treaties, while other specific references to it were by developing states who *did not* want it applied to biodiversity.<sup>174</sup> In particular, CHOM met a hostile reception by developing countries

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<sup>170</sup>Biersteker 1992.

<sup>171</sup>Haas 1996, 43-44.

<sup>172</sup>Based on a five-point definition in Rana 1994. See also Schmidt 1989; and Herber 1991.

<sup>173</sup>However, the U.S. refused to sign the latter over the inclusion of CHOM and controversy over a proposed management organization. Without U.S. support, the treaty will have little impact. Rana 1994, 247.

<sup>174</sup>I conducted the search via a CD-ROM containing all official UNCED and preparatory documents. IDRC 1993.



in negotiations on forestry and biodiversity.<sup>175</sup> Northern countries distanced themselves from the concept because they associated it with a general program of global economic management and redistribution and in opposition to market-based principles. Thus many states at UNCED used the language of areas or issues of “common concern” but refused to invoke CHOM. Significantly a new implementation agreement for UNCLOS, adopted by the UNGA in July 1994 and signed by formerly recalcitrant states including the United States, effectively altered the meaning of CHOM so relevant portions of UNCLOS (that is, Part XI on deep sea-bed mining) would conform with market-based principles.<sup>176</sup>

The debate over climate change showed a similar pattern. When governments first raised the issue in the General Assembly in 1988, Malta, which originally proposed CHOM in UNCLOS III, requested the inclusion of an agenda item entitled “Declaration proclaiming climate as part of the common heritage of mankind.”<sup>177</sup> However, governmental support for the concept quickly eroded as it became clear that climate change might actually receive serious international attention. When the General Assembly endorsed the creation of the Intergovernmental on Climate Change later that year, CHOM was out. Instead, the UNGA resolution was amended to refer to climate as the “common concern of mankind,” and CHOM never again received serious consideration in relation to climate change.<sup>178</sup>

In contrast, PPP, introduced into international discussions at about the same time as CHOM, started to gain prominence in the late 1980s after its support in the Brundtland Commission. It can now be found in a wide range of international agreements and programs including Principle 16 of the Rio Declaration, article 130R of the Single European Act, EC/EU

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<sup>175</sup>Imber 1994, 57-63 notes developing countries especially eschewed the use of CHOM because it infringed sovereignty. This marks a departure from consensus on CHOM in the World Conservation Strategy which states that gene pools “are the common heritage of mankind.” IUCN 1980, section 17.1. See also Mensah 1994, 47.

<sup>176</sup>United Nations 1994. The “Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, with Annex, adopted at New York, July 28, 1994” (UNGA A/RES/48/263), passed by a vote of 121-0 with 7 abstentions, contains legally binding changes to Part XI and is to be applied and interpreted together with the Convention as a single instrument. The LOS Convention, Agreement, and related legal material and commentary has been posted on the world wide web at <http://www.clark.net/pub/diplonet/los.html>. For other commentary, see AJIL 1994.

<sup>177</sup>Bodansky 1994, 52.

<sup>178</sup>Bodansky 1994, 52.

programs and legal instruments, and OECD Council Recommendations.<sup>179</sup> At least one scholar argues it has the status of a general principle of international law, and most acknowledge that it at least is recognized as a customary rule of international law among members of the OECD and within the EU.<sup>180</sup> The OECD intended it not as a rule of liability, but as a means to avoid environmental regulations that might alter the operation of the market and particularly of free trade.<sup>181</sup> It aims to internalize environmental costs rather than use command and control methods of environmental protection or market distorting subsidies -- thus its main purpose is to ensure continued economic growth by minimizing trade-offs between economic efficiency and environmental protection. Implementation of PPP demonstrates the trend in international environmental institutions to move toward market-based solutions to environmental problems consistent with the principle. Finally the growth-oriented ideology behind the PPP has clearly found its way into a wide range of international statements and agreements and constitutes the dominant meaning of sustainable development.

### *The Negotiations*

The negotiating process for Rio had a number of similarities to Stockholm. Most obviously, Maurice Strong was picked again as secretary-general (he had also been a member of the Brundtland Commission). The literature on UNCED also singles out Tommy T.B. Koh of Singapore, elected chairman of the Preparatory Committee (PrepCom), as a key leader who played an equally important role in moving delegates forward on divisive issues.<sup>182</sup> Koh had also worked with Strong in the preparations for Stockholm and had served as president of the U.N. Conference on the Law of the Sea in 1981 and 1982. The UNCED secretariat and bureau also

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<sup>179</sup>WCED 1987, 67-91; Sands 1994, xxiv; Commission of the European Communities 1993, 104-105; and OECD 1994a and 1994b.

<sup>180</sup>Smets 1994. See also Sands 1994, xxxiv.

<sup>181</sup>Jim MacNeill, who was involved in the initial formulation of the PPP, said it was "initially conceived as a principle to avoid... subsidies for environmental protection distorting trade... that was the major driving force." Author's interview.

<sup>182</sup>For example, Spector et al. 1994.

generally played important leadership roles in the preparation process, as great power leadership (especially from the United States) was lacking, especially in the early going.<sup>183</sup>

Also like Stockholm, four PrepComs preceded the conference -- one in Kenya (March 1990), two in Geneva (March/April and August/September 1991), and one in New York (March/April 1992). In the case of UNCED, procedural and organizational wrangling pushed most of the substantive issues to the final PrepCom in New York.<sup>184</sup> The pattern of slow progress changed as the conference date approached and the prospect of failure grew. Changes in the selection of delegates reflected the increased political stakes, as technical experts that had dominated earlier meetings were supplemented or replaced by political strategists with experience in multilateral diplomacy. The character of the New York session differed in process as well. The pace of negotiations picked up with more late night (and all night) meetings, closed door gatherings of small informal contact groups of states, and less formal meetings of working groups and plenaries (which meant far less NGO access). A pragmatic atmosphere prevailed that featured less lengthy debate and more creative problem solving. Not all issues could be resolved in the short time period remaining before the conference and a number of the most acrimonious points were left bracketed (that is, with disagreements left in the text that required further negotiation at the conference itself) in the texts sent on to Rio. In addition, specific proposals related to atmospheric issues and biodiversity (for example) were discussed late or not at all since relevant issues remained unresolved in the parallel negotiations on climate change and biodiversity. Negotiations on financial resources also broke down on the last day of PrepCom IV despite being given the highest priority. Nonetheless, delegates reached agreement on 85 per cent of Agenda 21 (although the remaining 15 per cent contained the toughest issues and had to be negotiated during the conference itself).

In negotiations, developing countries initially tried to forge a unified position and negotiate as the traditional G-77 plus China bloc. There was some hope that the environment could be a new bargaining chip to re-assert a Third World coalition weakened by the debt-ridden

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<sup>183</sup>Sjostedt et al. 1994, 18; and Hajost 1994, who notes that the United States did not appoint a high-level point person for the negotiations and U.S. agencies, including the Environmental Protection Agency, did not make it a priority until very late in the negotiation process. This is in stark contrast to the leadership role played at Stockholm.

<sup>184</sup>Chasek 1994b, who also gives a summary of the process, organization of issues, negotiations, and results achieved at the PrepComs. The discussion of PrepCom IV below draws primarily on her account.

1980s and the failure of the NIEO.<sup>185</sup> Apart from seeking specific interests in texts on sectoral issues (for example, forests, energy, and hazardous waste), the G-77 focused on four main principles:<sup>186</sup>

1. New and additional development assistance and equal say for developing countries in decision making.
2. Reduction in consumption of natural resources and environmental services in the North to give the south “environmental space” for its development.
3. No restrictions on imports to industrialized countries on environmental grounds.
4. Technology transfer on preferential and concessional terms.

The one big success of this strategy was to entrench the idea of “common but differentiated responsibility” of states to protect the global environment. That principle can be found in the Framework Convention on Climate Change and the Rio Declaration and its acceptance ensured that some equity considerations would guide international policy. However, the larger hopes of developing countries to secure substantial new financing, or use the environment/development nexus to change international economic norms, were never realized, nor does it appear that many Southern states fought hard for those changes.<sup>187</sup> Rather, the general thrust to support a right of development (Principle 3 of the Rio Declaration) and the like were generally phrased in such a way as to be compatible with current liberal economic norms, while basic environmental concerns embodied in such new norms as the Precautionary Principle (Principle 15 of the Rio Declaration) were agreed on with relatively little difficulty.<sup>188</sup> Furthermore, even the latter norm could be interpreted as fully compatible with liberal environmentalism. The principle essentially argues that in the face of uncertainty, action is still warranted under conditions of high risk of potential environmental damage. It fits the use of

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<sup>185</sup>Williams 1993.

<sup>186</sup>These principles are summarized in Porter and Brown 1996, 117 from their full discussion in South Centre 1991. The latter report served as the basis of a common negotiating strategy for the South. See also Mensah 1994.

<sup>187</sup>Porter and Brown, 117.

<sup>188</sup>For a detailed discussion of the Precautionary Principle and its history see O’Riordan and Cameron 1994. See also Bodansky 1991.

market instruments that aim to prevent waste generation at the source by incorporating costs up front rather than by means of end-of-pipe regulation.<sup>189</sup>

These latter outcomes did not necessarily go against the South's interests, but reflected a slightly different reality of North-South relations than implied by the apparently unified position found in documents such as the South Centre's report on Environment and Development.<sup>190</sup> For example, the controversy over "additionality" reveals how traditional goals became conflated with specific objectives in the UNCED negotiations.<sup>191</sup> Developing countries argued that the North, as the historical site of the majority of global pollution and the source of environmental damage, ought to help pay for the costs of environmental measures taken by developing countries (that the North desired). According to the principle of "additionality," any such money ought to be new and in addition to monies already committed for North-South aid.

Ozone negotiations set some precedent for the norm since developing countries received a commitment for new and additional monies as part of the 1990 (London) amendments to the Montreal Protocol. The parties set up a Multilateral Ozone Fund to assist developing countries, especially India and China who were hold-outs to the initial agreements.<sup>192</sup> The G-77 wanted similar mechanisms in other major treaties, such as climate change and biodiversity, but achieved only limited success. The language of those agreements (and even the ozone agreement) carefully avoided a commitment to the norm of additionality or the suggestion that additional funds for a particular environmental problem ought to set a precedent for responses to other problems. For example, developed countries did not quantify their commitment to provide additional resources at concessional levels (or grants) to meet the "incremental costs" of developing countries to enable them to comply with the treaties.<sup>193</sup> Furthermore, in each case, the GEF now manages the funds, which suggests the underlying conditions for the arrangements are unlikely to stray far from the liberal economic norms supported by the World Bank.

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<sup>189</sup>See, for example, Costanza and Cornwell 1992. See also OECD 1994a, 43, 149 which invokes the principle (along with PPP) to legitimize increased use of market instruments.

<sup>190</sup>South Centre 1991.

<sup>191</sup>Jordan 1994a.

<sup>192</sup>Parson and Green 1995, 20.

<sup>193</sup>Jordan 1994a, 28.

The reason “additionality” became so controversial was not simply because of dwindling aid budgets, but because some developing countries saw the additionality debate as a way to revive the more radical goals of institutional or economic restructuring reminiscent of the NIEO. Others sought special consideration but did not oppose the normative thrust of Northern proposals. The least developed and/or most debt ridden countries also showed reluctance to advance a broader normative agenda since they felt more vulnerable than in the 1970s and were weary of antagonizing industrialized countries.<sup>194</sup> As a result, neither a unified voice nor clear proposals ever materialized that focused solely on gaining additional financial resources.

The resulting ambiguity made it more likely that countries such as the United States, which had opposed the notion of additionality since Stockholm, would regard proposals as part of a broader agenda for institutional reform. It also allowed the United States to legitimately argue at UNCED’s third preparatory meeting that sustainable development could adequately be paid for by utilizing existing resources more efficiently and by drawing on the private sector.<sup>195</sup> The efficiency that would be gained by reliance on the private sector, for example, or the Polluter Pays Principle, would produce the needed additional resources. The norm of common but differentiated responsibility avoided such divisions among Southern states. Whereas it supported the idea that different levels of environmental protection might be expected of rich and poor, or grace periods might be allowed for costly domestic reforms,<sup>196</sup> it implied nothing about changes to governing international institutions or the need to reshape the international political or economic order.

The outcomes of UNCED reflected this more modest goal.<sup>197</sup> For example, money pledged at UNCED was financed primarily through the GEF, which reflected World Bank policy and norms; developing countries achieved no real concessions on technology transfer which remained mainly through commercial means; and OECD countries in their statements and actions often predicated concessional financing (a primary condition for additionality sought by

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<sup>194</sup>Porter and Brown 1996, 117.

<sup>195</sup>Jordan 1994a, 19.

<sup>196</sup>For example, the Montreal Protocol allows a 10-year grace period for developing countries.

<sup>197</sup>Haas, Levy, and Parson 1992.

G-77) on market and policy reform.<sup>198</sup> Even the GEF, which appears now to be a permanent institution, does not solely represent “additional” funds, but often money diverted from other development assistance programs at the discretion of donor countries. Whenever additional finances are mentioned in UNCED documents, such as Agenda 21, the language is vague, avoids specific monetary goals or mechanisms, and does not generally differentiate between resources to be committed for environmental or more traditional development purposes. The compromise wording on development aid states that countries would “reaffirm” their commitment to reach the UN target of 0.7 per cent of GDP for official development assistance and augment aid programs to reach that target “as soon as possible.”<sup>199</sup> In general, the downward trend in development financing from North to South that had already begun by 1992 continued rather than being altered by UNCED, with aid levels in the 1990s averaging just under half the 0.7 per cent GDP target sought by developing countries.<sup>200</sup>

So whereas some authors suggest the environment, and UNCED specifically, provided a renewed opportunity for a Third World coalition reminiscent of the NIEO, the different objectives and concerns of many developing countries, not least of which being the economic and ideological differences between them, prevented any kind of push for a radical normative agenda like the NIEO. Negotiations on a number of specific issues also did not break down along North-South lines. The G-77 provided draft texts for all the UNCED negotiations, but states within the coalition often divided into smaller coalitions on issues of direct interest to them. For example, coalitions formed around states with highly fragile mountain ecosystems and among a group of small low-lying island states likely to be most affected by rising sea levels caused by global warming. The negotiations over climate change in particular caused rifts in the G-77 – with small island states and oil producing states taking opposite positions – that continued to grow after UNCED.<sup>201</sup> These specific splits did not generally affect negotiations on

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<sup>198</sup>Haas, Parson and Levy 1992; and Jordan 1994a, 19-20.

<sup>199</sup>Quoted in Chasek 1994b, 60.

<sup>200</sup>Jordan 1994a, 26-27.

<sup>201</sup>At the first Conference of the Parties for the Framework Convention on Climate Change in Berlin (1995), the G-77 formally split when India, at the behest of small island states, led the majority of developing countries to push for a strong protocol to limit emission of greenhouse gases, over the objections of a number of oil producing states.

basic norms or principles, however.<sup>202</sup>

Industrialized countries also split on a number of issues. The United States was the least sympathetic to developing country concerns, particularly if they appeared to threaten U.S. freedom of economic action. As a result, the United States did not play a leadership role, and the administration of George Bush appeared disinterested until very late in the negotiation, when it used its clout more to block initiatives it disagreed with (such as targets and timetables on limiting Greenhouse Gas emissions) rather than to propose compromises or push for more far-reaching agreements.<sup>203</sup> The Nordic countries were more sympathetic to developing country demands and the EU as a whole fell somewhere in between, as did Japan.<sup>204</sup> Again, different countries took the lead (or acted as spoilers) on particular policy initiatives, but a specific negotiating strategy in the North was not apparent, perhaps owing to the lack of U.S. leadership and splits within the EU.

In terms of the normative development, the underlying emphasis on market norms, even when combined with developing country demands on issues such as a “right to development,” meant North and South were really not as far apart on core issues as some accounts have argued. For example, Porter and Brown point out that despite some reluctance from both developing and some developed countries, agreement was reached in the negotiations on Agenda 21 to remove or reduce subsidies inconsistent with sustainable development (such as sales of timber from public lands at below costs of production) and to improve price signals through environmental charges or taxes.<sup>205</sup> Similarly, Malaysia, one of the developing countries most opposed to the “eco-imperialism” of the North in forestry negotiations, used amongst the strongest market-led, right to growth rhetoric.<sup>206</sup> Market-friendly measures were supported in the Rio Declaration and a number of specific proposals in chapter 8 of Agenda 21, on Integrating Environment and Development in Decision-Making. Meanwhile, any move to alter the international liberal

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<sup>202</sup>Sjöstedt et al. 1994, 17; and Williams 1993.

<sup>203</sup>Porter and Brown 1996, 118; and Hajost 1994.

<sup>204</sup>Porter and Brown 1996, 118.

<sup>205</sup>Porter and Brown 1996, 120.

<sup>206</sup>Imber 1994, 98.



economic order (such as support for commodity price agreements) was opposed by the United States and other OECD countries.

### *The Rio Declaration and Norm-Complex*

The Rio Declaration on Environment and Development articulated the trend in environmental governance toward liberal environmentalism. Although it only constituted “soft law” like its predecessor at Stockholm, the Rio Declaration “is the one ‘product’ of UNCED designed precisely to embody rules and principles of a general and universal nature to govern the future conduct and cooperation of States...” and it reflected “to the extent any international instrument can do so – the current consensus of values and priorities in environment and development.”<sup>207</sup> The other UNCED outcomes listed earlier reflected the norms in the Declaration.

The Rio Declaration is arguably a more ambiguous document than its Stockholm predecessor and contains obvious political compromises and some vague language. Nonetheless, its preamble and 27 principles demonstrate a much greater synthesis of the environment/development nexus than did the Stockholm Declaration. Those who see it as a step backward from Stockholm most often point to its more anthropocentric focus, its further entrenchment of state sovereignty, and less attention to concrete environmental or conservational concerns. That is all true. But the Declaration is not a failure from the perspective of the synthesis that the organizers of Rio sought or of how environmental governance had in fact evolved. To the contrary, the Declaration provides an accurate “snapshot of history”<sup>208</sup> of what I argue was the emerging normative consensus of liberal environmentalism. As one author put it, within the Rio Declaration, “[T]he liberal economic order... acquires for the first time a normative character in an international instrument relating to the environment, as States commit

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<sup>207</sup>The first quotation is from Pallemerts 1994, 1, and the second from Porras 1994, 20. On the negotiation of the Declaration see Kovar 1993; Imber 1994; Grubb et al. 1993:85-95; Porras 1994; and Campiglio, et al. 1994. Many of the same issues arose in negotiations over climate change, which have been documented in a large number of books and articles. See, for example, Mintzer and Leonard 1994; Rowlands 1995; Paterson 1996.

<sup>208</sup>Thompson 1993, 85.

themselves to 'promote' this system in order to 'better address the problems of environmental degradation.'"<sup>209</sup>

Negotiations for the Rio Declaration got off to a slow start owing to organizational and procedural wrangling during the first two PrepComs in 1990 and early 1991. The working group that would negotiate the Declaration (Working Group III on legal and institutional issues) was not established until PrepCom II when delegates agreed it would prepare what Maurice Strong initially hoped would be an "Earth Charter." Reminiscent of his early goals for Stockholm, Strong envisaged an inspirational statement of care for how nations and people ought to treat the Earth and one another. In PrepCom III, however, developing countries made it clear they would not accept a document that seemed destined to focus too heavily on environmental concerns.<sup>210</sup> Neither could much support be found for a legal document like the Universal Declaration of Human Rights, the original vision of a statement of principles proposed in the Brundtland report. A group of legal experts commissioned by Brundtland hoped such a declaration might later evolve into protocols with specific rights and obligations.<sup>211</sup> However, the project of codifying international environmental law, started by this renowned group of experts from North and South, never got a serious hearing.<sup>212</sup> Not surprisingly, then, an early Canadian draft proposal of a legal statement of rights and obligations (reminiscent of a similar Canadian proposal at Stockholm) garnered little support.<sup>213</sup> As a result of these conflicts, the discussions in Working Group III revolved around what the statement of rights and principles should be called, with G-77 countries insisting the title better reflect development concerns. Eventually, a Malaysian proposal to call the document the Rio Declaration on Environment and Development won out over Strong's Earth Charter.

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<sup>209</sup>Pallemaerts 1996, 633-634. The quotation is from Principle 12 of the Declaration.

<sup>210</sup>Grubb et al. 1993, 85; Chasek 1994b; and Chatterjee and Finger 1994, 49.

<sup>211</sup>WCED 1987, 332.

<sup>212</sup>Indeed, international lawyers did not play a prominent role in the negotiations over the proposed Earth Charter/Rio Declaration. Significantly, there was no suggestion that the International Law Commission play a prominent role in the Earth Summit preparations, an indication that most states felt the creation of new international law was mainly a political process best left to intergovernmental negotiations. The current sense among international lawyers is that the law commission is trusted to refine international law, not to develop new law, especially in a process like the Earth Summit where political, economic and scientific considerations take precedence. Shibata 1994.

<sup>213</sup>Pallemaerts 1996, 627-629; and Shibata 1994, 33-34.

Negotiations over the substance of the statement of principles (as with nearly all substantive issues) took place almost entirely in PrepCom IV. The working group assigned to negotiate the Earth Charter/Rio Declaration started the five week session with a compilation text of over 136 paragraphs. That got whittled down and massaged into the 27 principles of the Rio Declaration, which emerged from the session as the only unbracketed document sent on to Rio. The debate itself was based largely on a G-77 draft text. PrepCom chair Tommy Koh had to step in a number of times throughout the session to work out compromises between G-77 and other parties, and eventually set up a new drafting committee of eight G-77 and eight OECD delegates two days before the end of the session. Although a number of delegations were unhappy with Koh's methods and various aspects of the final text, he was able to use his negotiating skill and personal and political capital to forge a normative consensus acceptable to all the delegations that synthesized proposals from a variety of draft texts.<sup>214</sup>

The stalemate in negotiation came not over how to conceive of the environment/development nexus, but on how rights and obligations ought to be divided between North and South. The South wanted emphasis on state sovereignty and increased obligation for environmental protection to fall on the North, while the North wanted a more equal burden sharing closer to the common responsibility approach of the Brundtland Commission. The draft proposal submitted by G-77 articulated their general goals listed above. The most important of the specific norms proposed included state sovereignty, common but differentiated responsibility, a right to development, no use of environmental considerations to justify trade restrictions, and a right to adequate "environmental space" for developing countries to allow as much room to develop as the North had required.<sup>215</sup> Put bluntly, environmental space meant space to pollute in order to develop. This norm would have fit with the norm of common but differentiated responsibility in that the North would have been obligated to reduce emissions, change patterns of consumption or production, develop new technologies, and so on, first and to a greater degree than the South. That way, the South would have an equitable opportunity to pollute as compared to the opportunity the North had historically enjoyed. However, the South eventually dropped

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<sup>214</sup>Chasek 1994b, 56.

<sup>215</sup>For a summary see Porter and Brown 1994, 126; See also South Centre 1991; and Mensah 1994.

this norm as it was the most unacceptable to OECD countries. The other norms listed above did appear in the final draft in one form or another.

The strong position of the South made some countries in the North, particularly the United States, appear on the defensive. The United States, for example, tried to block any wording that implied specific responsibilities. Northern countries also deleted a principle proposed in Koh's compromise draft that identified industrialized countries' consumption patterns as the "main cause" of environmental degradation, and another one that would have entrenched additionality and technology transfer on preferential and concessional terms.<sup>216</sup> These conflicts related much more to state responsibility than to either development norms themselves or the basic compromise of liberal environmentalism which placed environmental protection as firmly fitted within a liberal economic system. Thus the positive contributions from the North that promoted liberal environmentalism easily found acceptance. For example, the parts of the U.S. draft that promoted open and free markets (but that markets should reflect full economic accounting of environmental costs and benefits) and the Polluter Pays Principle made it into Koh's final synthesis and appeared to cause little disagreement.<sup>217</sup>

I would argue that it is significant that the Rio Declaration emerged from the PrepCom in its final form while other documents did not. It demonstrated that a normative consensus was largely present going into the Rio process, although a number of specific formulations had yet to be resolved. Negotiations did not require the same kind of trade-offs among various interested parties that characterized negotiations on a number of specific environment and development problems addressed in Agenda 21, for example. In this sense, UNCED was indeed successful in institutionalizing a legitimate norm-complex -- or as others have called it, a regime of sustainable development or new international law of sustainable development<sup>218</sup> -- even if some environmentalists were unhappy with the result or felt it was a step backward from the goals articulated at Stockholm.<sup>219</sup> While UNCED might be criticized for not producing enough

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<sup>216</sup>Porter and Brown 1994, 127.

<sup>217</sup>Grubb et al. 1993, 86.

<sup>218</sup>Spector et al. 1994; Sands 1993; and Pallemmaerts 1996.

<sup>219</sup>For example, Chatterjee and Finger 1994; Sachs 1993; and Pallemmaerts 1994, 1996.

concrete action on particular issues, it did achieve the institutionalization of a particular vision or understanding of how the international community ought to manage or approach global environmental problems and the norms that would guide future action.

The principles themselves are not easily grouped as many combine elements of environment and development. Below I will highlight key principles as they demonstrate changes in norms or entrenchment of norms already present since Stockholm or the Brundtland Commission report. In general, the norm-complex of liberal environmentalism articulated in the Rio Declaration supports sustained economic growth, free trade, privatization of the commons, and the use of market-based instruments as the preferred means of environmental protection.

The Declaration starts with a human centred vision of the environment, stating in Principle 1 that, “Human beings are at the centre of concerns for sustainable development.” Human beings should live “in harmony” with nature, but the anthropocentric focus is striking in comparison to earlier global declarations. Although the Stockholm Declaration and 1982 World Charter for Nature viewed human beings as primary, they clearly recognized ecological limits and the inherent value of the natural environment and other species. The Rio Declaration does not delineate the various aspects of the environment that require protection or management as did the first seven principles of the Stockholm Declaration. Rather, the core norms around sovereignty and the importance of human-centred development are dealt with immediately.

Principle 2 on sovereignty reproduces almost verbatim Principle 21 of the Stockholm Declaration, but adds that states have the sovereign right to exploit their own resources “pursuant to their own environmental *and developmental* policies.” (Italics added). Reading the Declaration as a whole makes clear that developmental policies mean liberal economic and growth-oriented policies, and that environmental concerns ought not to limit a state’s ability to pursue such policies by, for example, imposing trade restrictions based on environmental concerns. The point is made explicit in Principle 12:

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. Trade policy measures for environmental purposes should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade....

Clearly free trade and environmental protection are seen as compatible under this formulation. Arguably, free trade and liberal economic policy more generally are viewed as even necessary for

successful environmental protection. Indeed, Principle 12 reproduces, almost verbatim, sections of GATT article XX that have been used to limit environmental restrictions on trade.

The sovereignty provision mostly articulates what states already recognized as the basis of international environmental law since Stockholm. But Rio helped to further entrench state sovereignty by incorporating the norm in Principle 2 into the other Rio agreements. For example, the debate on forests during the PrepComs became polarized between states, such as the United States and Canada, that argued for a “global responsibility” approach, and Malaysia and India, who argued for “sovereign discretion.” Malaysia, India and other developing countries feared the former approach would lead to forests being viewed as part of the “Common Heritage” (CHOM) norm, which, as I pointed out earlier, they strongly opposed on the grounds that it would potentially allow Northern states to have a say in how forests within the jurisdiction of Southern states should be managed.<sup>220</sup> Similarly the climate change treaty incorporates the newer Rio interpretation of state sovereignty, which by emphasizing development as much as environment further reinforces that development policies ought not to be interfered with on environmental grounds. Thus the preamble to the Framework Convention on Climate Change recalls the “pertinent provisions” of the Stockholm Declaration rather than identifying Principle 21 directly, and then reproduces verbatim the language of the Rio Declaration’s Principle 2. Biodiversity actually uses the sovereignty language of Stockholm Principle 21, but its substantive provisions reinforce the newer interpretation by not imposing limits on environment or development policies that may affect the environment beyond the limits of national jurisdiction.<sup>221</sup>

The other side of sovereignty – state responsibility for activities that cause environmental damage to other states or common areas – is also present. However, only minor progress had occurred prior to Rio on liability for environmental damage in international law, and Rio did little to advance this area of law. Principle 13 merely exhorts states to develop “national” law regarding liability, and limits the development of international law to liability and compensation for “adverse effects of environmental damage caused by activities within their jurisdiction or

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<sup>220</sup>Porter and Brown 1996, 126.

<sup>221</sup>Pallemaerts 1994, 7.

control,” a narrower formulation than Stockholm’s Principle 22.<sup>222</sup> Similarly, Principle 14 calls on states to “cooperate” to prevent the relocation of “activities or substances that cause severe environmental degradation or are found to be harmful to human health.” It also does not set up any liability; rather it is a minor acknowledgement of developing country concerns that hazardous waste not be exported to developing countries.<sup>223</sup>

One advance from Stockholm was that Principle 18 obligates states to notify others of natural disasters or other emergencies “likely to produce sudden harmful effects on the environment of those states” and Principle 19 obligates states to give advance notification about activities that are likely to cause environmental damage in other states, and to consult with those states. These principles have been entrenched in a number of other treaties and declarations since 1972 when states could not agree on the norm, as I pointed out earlier.<sup>224</sup>

A number of the principles articulate norms that I have grouped under the heading of the political economy of environment and development. Principle 3 proposes the controversial “right of development,” which had been strongly opposed by the United States during negotiations.<sup>225</sup> Like the term sustainable development itself, the Declaration never defines development. Yet, significantly, the “right to development” appears before any mention of “sustainable development.” In other words, traditional development goals should not be inhibited by “sustainable development,” if defined any differently than development in its classical sense.<sup>226</sup> In line with the general thrust of the Rio agreements, the WCED, and other

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<sup>222</sup>Pallemaerts 1996, 639-640; and Kiss 1994, 60.

<sup>223</sup>In 1994 parties to the 1989 Basel Convention on the Transboundary Movement of Hazardous Waste and its Disposal agreed to a ban on the waste trade with less-industrialized countries. This development is an exception to the general thrust of Principles 12, 13, and 14 which support trade liberalization as a way to improve environmental quality. On the ban see Clapp 1994.

<sup>224</sup>Kiss 1994, 59-60.

<sup>225</sup>The United States released “interpretive statements” (one of only a handful of states to do so) on some sections of the Rio Declaration and Agenda 21. They included the U.S.’s long-standing opposition to a “right” to development on the grounds that a “right” might override other rights, such as human rights. According to the statement, the United States does not oppose principle 3 understood as the promotion of development “in a way that the development and environmental needs of present and future generations are taken into account.” The statement on principle 3 is reproduced in Thompson 1993, 90 fn. 1.

<sup>226</sup>Pallemaerts 1996, 632.

development norms, development in this context appears to mean mainly the promotion of economic growth.

Principle 4 articulates the most general statement of how environment and development are to be linked. It states: “In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.” The two-way relationship implies both the need for policies such as environmental assessments (Principle 17)<sup>227</sup> and that environmental concerns ought to fit into overall strategies for development. The precise way in which environmental policies ought to be integrated into economic policy must be interpreted through other parts of the Declaration and other legal instruments and policies. The EC and later the EU was and remains the most advanced jurisdiction in integrating environment and economics, and, as I argued above, the general movement there has been to support norms consistent with fitting environmental protection into a liberal economic system that promotes growth, through market-friendly mechanisms and so on.<sup>228</sup>

The promotion of an open (liberal) international trading system in Principle 12 has already been mentioned, which notably removes links present in both Stockholm and in the WCED report with the goals to restructure the international economic system contained in the NIEO. It also equates sustainable development with economic growth when it states that an open international economic system “would lead to economic growth and sustainable development in all countries” and would therefore “better address the problems of environmental degradation” than, presumably, a less open international economic system. This goes much further than the Brundtland Commission which, although it supported economic growth, especially in developing countries, saw environmental protection as a necessary condition of sustainable development. Nonetheless, the Rio Declaration is not as large a step from Brundtland as some analysts suggest. It merely legitimated one particular interpretation or pathway in the operationalization of sustainable development already discernable in the language WCED used. Pallemmaerts is correct

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<sup>227</sup>However, the principle limits its application to national legislation and projects that are subject to “a competent national authority.” However, Principle 19 – advance notification – implies states ought to notify others of results of an assessment that might produce effects beyond state borders. Hence, the Declaration implies transnational application of the principle. See Kiss 1994, 60.

<sup>228</sup>Sands 1994, xlv-xlvi. See also Commission of the European Communities 1993.



that the Rio Declaration “confers on economic growth a new ecological legitimacy” but overstates the case that such legitimacy was not already implied in the WCED report.<sup>229</sup>

The one norm that implies that any obligations toward the environment might operate in anything but a liberal market context is Principle 7, which recognizes the “common but differentiated responsibility” of developed and developing states toward the pursuit of sustainable development. While it does not contradict liberal environmentalism, it does harken back to NIEO goals of differential obligations of the North and South and hence some possible interference in what might be the most economically efficient means of dealing with global environmental problems. This principle can also be found in articles 3(1) and 4(1) of the Framework Convention on Climate Change (FCCC) and is a fundamental element of the implementation of the treaty, which creates different obligations for developed and developing states.

The main operative provisions of the FCCC deserve mention in this regard since the operationalization of “common but differentiated responsibility” still appears to fit with using or creating markets and liberal economic norms more generally. Article 4(2)(a and b) spell out commitments. In line with common but differentiated responsibilities, Article 4(2)(a) obligates developed states to “tak(e) the lead” in modifying their greenhouse gas emissions, but to do so while recognizing, *inter alia*, “the need to maintain strong and sustainable economic growth.” It further states that “Parties may implement such policies and measures jointly with other Parties.”

This idea of “joint implementation” was shown earlier to fit with the marketization of environmental protection. Hence, even the commitment in article 4(2)(b) by developed countries to “aim” to return to 1990 emission levels of carbon dioxide and other greenhouse gases not controlled by the Montreal Protocol by the year 2000, can be achieved “individually or jointly.” While the final status of “joint implementation” in the climate change regime remains unsettled at the time of writing, indications are that the U.S. is conditioning its support of a new protocol, expected in December 1997, on agreement to some form of market mechanism. U.S. Under Secretary of State Timothy Wirth’s speech to the second Conference of the Parties in July 1996 made the link explicit:

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<sup>229</sup>Pallemaerts 1996, 633.

Based on these principles -- encompassing environmental protection, realism and achievability, economic prosperity, flexibility, fairness and comprehensiveness -- the United States recommends that future negotiations focus on an agreement that sets a realistic, verifiable and binding medium-term emissions target. We believe that the medium-term target must be met through maximum flexibility in the selection of implementation measures, including the use of measures such as reliable activities implemented jointly and trading mechanisms around the world.<sup>230</sup>

Since U.S. support would be necessary for a protocol, and the United States is for the first time taking a leadership role in pushing for a binding agreement to limit greenhouse gas emissions, the continued emphasis on market-friendly mechanisms and liberal environmentalism as an underlying normative framework for the FCCC seems likely.

In terms of how states should manage national and international environmental problems, Principle 11, in combination with the Polluter Pays and Precautionary Principles (15 and 16), makes clear that any such management must fit into a general program that promotes economic growth and liberal markets. Principle 11, for example, says states "shall enact effective environmental legislation" but that "standards, management objectives and priorities should reflect the environmental and developmental context to which they apply." Similarly, the PPP, in order to avoid any misunderstanding, must only be applied "without distorting international trade and investment." That meaning fits precisely with the way the principle developed within the OECD.

The Polluter Pays Principle is reinforced by chapter 8 of Agenda 21, on integrating environment and development in decision-making. It proposes that a legal framework for sustainable development should "not only [act] through 'command and control' methods, but also as a normative framework for economic planning and market instruments."<sup>231</sup> Chapter 8 also explicitly promotes more widespread use of market mechanisms and measures aimed to internalize environmental costs, both of which follow from the PPP. Although such measures are to be "complementary" to regulatory approaches, a quarter of chapter 8 is devoted to market instruments and the overall normative thrust is to "include, wherever appropriate, the use of market principles in the framing of economic instruments and policies to pursue sustainable

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<sup>230</sup>Wirth 1997 and author's interview.

<sup>231</sup>Agenda 21, 8.13.

development.”<sup>232</sup> Since 1992, the UN Commission on Sustainable Development has reiterated PPP on several occasions and the discussion earlier has shown that it, and concepts associated with it, form the normative basis of a wide-range of environmental policies and programs. Grubb et al. sum up the importance of chapter 8 to future environmental policy as follows:

In setting out the general measures and form of policies which need to be adopted in pursuit of sustainable development, this little-publicized chapter -- finalised [sic] at PrepCom IV -- forms potentially one of the most powerful of all individual chapters in Agenda 21.... It reflects a strong move towards consideration of economic instruments for environmental policy, and comes very close to a global endorsement of a ‘polluter pays principle’....<sup>233</sup>

Similarly, Principle 15 for the first time endorses the Precautionary Principle in a global declaration, although the approach is qualified in two ways. First, it shall be applied “by states according to their capabilities.” Second, a “lack of full scientific certainty shall not be used as a reason for postponing *cost-effective* measures to prevent environmental degradation” (italics added). The endorsement of “cost-effective” measures implies that the PPP and precautionary approach should be applied together. The principle did not originate at Rio, but has roots in German environmental thought and had previously appeared in embryonic form in regional documents and declarations prior to Rio, dating back to at least the Ministerial Declaration at the second International North Sea Conference in 1987.<sup>234</sup> Since its legitimation at Rio, however, it has gained some prominence in international law and discourse, appearing in a wide range of conventions including the conventions on climate change and biodiversity, a number of international agreements on fish stocks, the 1996 Protocol to the London Dumping Convention, and in the most recent environmental action programme of the European Union.<sup>235</sup>

Not all norms listed in the Rio Declaration fit neatly into the norm-complex of liberal environmentalism. For example, a number of principles address with the need to increase participation in environment and development decision making and access to information (Principle 10) and to encourage participation of various societal groups including women

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<sup>232</sup>Agenda 21, 8.31 (c).

<sup>233</sup>Grubb et al. 1994, 113.

<sup>234</sup>Birnie 1992, 88; and, generally, O’Riordan and Cameron 1994.

<sup>235</sup>For a summary see UN Commission on Sustainable Development 1997.

(Principle 20), youth (Principle 21), and indigenous people (Principle 22). These principles are consistent with a wide range of multilateral activities and promotion of these norms at the international and domestic levels. These norms are not central to (and do not contradict) the main argument put forward here, but should be acknowledged as potentially important components of the future development of sustainable development thinking.

In addition, purely political principles found their way into the Declaration, such as the not-so-veiled nod to the plight of the Palestinians in Principle 23 which called for the protection of the environment for “people under oppression, domination and occupation.” Similarly, the general calls for international cooperation (Principle 27), protection of the environment during warfare (Principle 26), and the indivisibility of peace, development and environment (Principle 25) represent general aspirations rather than specific goals.

I describe the resulting norm-complex of liberal environmentalism below to facilitate comparison to the norm-complex from Stockholm. Principles in brackets refer to the Rio Declaration. The summary below is followed by Table 1.1 on the evolution of norms from 1972-1992.

#### State Sovereignty and Responsibility:

1. The basic principles (2, 13, 14) remain unchanged from Stockholm with two important exceptions. First the obligation to notify others of potential environmental harm not accepted at Stockholm is entrenched (Principles 18 and 19). Second, added to a state’s right to exploit its own resources pursuant to environmental policies is to do so pursuant to developmental policies, which arguably upset the balance struck at Stockholm between sovereign rights to exploit resources and environmental protection.<sup>236</sup>

#### Political Economy of Environment and Development:

2. The new equity principle of “common but differentiated responsibilities” for developing and developed countries replaces Stockholm’s emphasis on the latter and Brundtland’s on the former (Principle 7). Two imperatives follow:

- a) The right to development is entrenched which is generally consistent with Brundtland’s imperative to revive global growth (Principles 3-5) and growth and development have precedence over environmental protection if the social and economic costs are too high for developing countries (Principle 11).
- b) “Unsustainable” patterns of production and consumption should be reduced and eliminated (Principle 8).

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<sup>236</sup>Pallemaerts 1994, 5.

3. Free trade and liberal markets are supported unequivocally with no reference to interventions such as commodity price stabilization. Free trade and environmental protection are presumed to be compatible (Principle 12).

4. Technology transfer is essentially left to market mechanisms, except for the least developed countries (Principle 9).<sup>237</sup>

5. The same environmental cooperation ethic remains (conserve and enhance resources for present and future generations), but human beings should be at the centre of such concerns (Principles 1, 7, 27).

#### Environmental Management:

6. Although environmental impact assessments are endorsed (Principle 17) the primary management norms are the PPP (Principle 16) and Precautionary Principle (Principle 15). The former promotes a preference for market-based instruments over command and control methods.

As argued, the precautionary principle is fully compatible with this approach. The theme of cost-effectiveness also runs through the range of UNCED documents and the statement on integrating environment and development in decision making (Agenda 21, chapter 8) supports this trend, suggesting that environmental assessments are to be considered on cost/benefit criteria and with PPP in mind.

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<sup>237</sup>See Haas, Levy, and Parson 1992, 28-32.

Table 1.1

**The Evolution of International Environmental Norms: 1972-1992**

	<b>UNCHE (Stockholm) 1972</b>	<b>WCED (Brundtland Commission) 1987</b>	<b>UNCED (Rio de Janeiro) 1992</b>
<b>State Sovereignty and Liability</b>	1. Sovereignty over resources and environmental protection. Responsibility for pollution beyond state borders	1. Unchanged	1. Unchanged plus advanced notification
<b>Political Economy of Environment and Development</b>	2. Developed and developing countries differ on sources of and solutions to environmental problems  3. Free trade and commodity price stability  4. Environmental protection requires substantial transfers of technology and resources  5. States should cooperate	2. Common responsibility —revive global growth —shared responses  3. Free trade plus emphasis on global growth. Some intervention  4. Unchanged plus specific proposals  5. Cooperation for global economic growth	2. Common but differentiated responsibility  3. Free trade and liberal markets. Environment and free markets compatible  4. Transfers left primarily to market mechanisms, except for LDCs  5. Same plus human centred development
<b>Environmental Management</b>	6. Command and control methods of regulation	6. Mix of command and control and market. Polluter Pays Principle (PPP) endorsed	6. Market mechanisms favoured. PPP and Precautionary Principle
<b>Norm-Complex</b>	<b>Environmental Protection</b>	<b>Managed Sustainable Growth</b>	<b>Liberal Environmentalism</b>

## **Conclusions**

This chapter has traced through norms of international environmental governance and demonstrated their evolution toward the compromise of liberal environmentalism. The United Nations Conference on Environment and Development legitimated this norm-complex which now dominates practices of many states, international organizations, and cooperative arrangements that govern responses to global environmental problems.

Admittedly, not all analysts examining the content of international governance would have focused on the political economy of environment and development as I have. Others have focused on the push toward local participation in environmental decision making, environmental security, or simply the increased scope of international cooperation and activity around environmental problems that cross borders. Although these and other changes in the nature of environmental governance are important, I have argued that the major thrust of the institutionalization of “sustainable development” has been toward liberal environmentalism and that this set of norms encapsulates the main ideas that UNCED legitimated. To focus on other factors misses the core of the compromise at the heart of the norm-complex institutionalized at Rio.

Furthermore, I have argued that liberal environmentalism marks a significant shift from earlier attempts to address global environmental problems and to link environment and development. The norms and practices that followed from the Stockholm conference tended merely to juxtapose environment and development and often implied a suspicion, if not outright hostility, toward market forces. Solutions to environmental problems were most often framed in terms of the need for regulation and intervention, as were solutions to adapting development strategies to address environmental problems. The Brundtland Commission attempted a new synthesis of environment and development that put economic growth at the centre of strategies for sustainable development. It proposed a mix of market forces, redistributive policies, and environmental interventions to promote growth of a sustainable kind, in what I have called a norm-complex of managed sustainable growth.

The Earth Summit institutionalized one major pathway from Brundtland. It entrenched the idea that market forces can be compatible with environmental protection and that a liberal economic order is best suited to achieving environment and development goals. It showed

suspicion toward the types of global management implied by the Brundtland Commission, or by norms such as the Common Heritage of [Hu]mankind. Instead, the Earth Summit agreements reflected a faith in the market, or in the increased adaptation of human activity to market norms, as the preferred means to solve environmental problems.

Indeed, one of the major omissions from Agenda 21 was the regulation of multinational corporations, which might have restricted freedom in the global marketplace. That omission occurred in the context of the active participation of multinational corporations in the conference and the close relationship of at least one powerful industry lobby – the Business Council for Sustainable Development (BCSD) – with the conference secretariat.<sup>238</sup> Industry played a dual role at UNCED, with some groups lobbying hard to prevent any regulation that might threaten their short term interests, while other groups, including the BCSD, argued that industry could play a positive role via self-regulation.<sup>239</sup> In the end, industry was enlisted to voluntarily engage in good practices and their freedom of activity was apparently seen as important for the overall goals of the liberal economic order.

Thus the Earth Summit outcomes emphasized norms consistent with free trade, the Polluter Pays Principle, and Precautionary Principle, and promoted market mechanisms to address environmental problems. Furthermore, UNCED reinforced state sovereignty and control over global resources and placed human beings squarely at the centre of global environmental governance. The next two chapters offer possible explanations of why the ideas associated with liberal environmentalism prevailed.

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<sup>238</sup>Chatterjee and Finger 1994; Sachs 1993; Rogers 1993; and Maurice Strong, author's interview.

<sup>239</sup>The BCSD actually lobbied both positions in some ways. For example, it sought the removal of references to regulation of multinational corporations from Agenda 21, but also promoted the idea of voluntary self-regulation for industry.



## **Chapter Three**

### **Epistemic Communities and International Environmental Governance**

Chapter two detailed how norms governing international environmental policy evolved toward the current compromise of liberal environmentalism. It also traced through the origins of many of the ideas that eventually became institutionalized in environmental governance. In so doing, it identified outcomes that reflected the influence of some actors, ideas, and institutions over others. The question remains, however, why the ideas associated with liberal environmentalism came to dominate. This chapter and the next attempt to explain why the norm-complex around international environmental governance evolved as it did.

In this chapter, I test an epistemic communities hypothesis, as formulated primarily in the work of Peter Haas, focusing especially on the role of science and a “scientific ecology” community.<sup>1</sup> I begin with a test of this hypothesis for three reasons. First, it provides the clearest explanatory framework available of how scientific knowledge translates into changed patterns of state behaviour and international interactions. Second, Haas’s work has been influential in the development of thinking on the role of ideas in international environmental coordination and international relations more generally.<sup>2</sup> Finally, international environmental governance is a most likely case for the hypothesis since the epistemic communities literature applies best to issue areas characterized by uncertainty and that require a high degree of technical expertise. It should also be noted that the literature contains a prescriptive element, in that analysts seem to pin their hope for improved environmental governance on the progressive influence epistemic communities exert to modify state interests.<sup>3</sup>

Ultimately I find this explanation inadequate. Hence, the next chapter examines the role of economic ideas and puts forward an alternative explanation that better accounts for the interaction of ideas and institutions in global governance. It focuses on social structural

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<sup>1</sup>Haas 1989, 1990, 1992a, 1992b, 1996; and Haas and Haas 1995.

<sup>2</sup>Goldstein and Keohane 1993b, 11; Yee 1996; Litfin 1994; and Haas 1992b.

<sup>3</sup>Epistemic communities are especially noted for their progressive influence on “learning” within international organizations, but also within domestic bureaucracies. See Haas and Haas 1995.

pressures that favour the selection of some ideas over others in the institutionalization of international norms.

The separation of scientific and economic ideas may at first appear arbitrary and artificial. For example, economists and natural scientists sometimes interact in the policy process and even in the technical work on ecological problems. Also, individual scientists and economists might be influenced by ecological ideas and both groups might be considered “epistemic communities” in their own right. However, treating both equally as epistemic communities undermines the logical basis of the explanation -- that a single community is granted legitimacy based on its claim to authoritative and policy-relevant knowledge in a certain issue area. If more than one such community exists, the reason for adopting the position advocated by such a group could not be accounted for simply by looking at its privileged position owing to its knowledge claims. Thus, in this chapter, I focus on the strongest group identified in the literature -- scientists, and especially those scientists loosely considered sympathetic to “scientific ecology.”

Three problems stand out with this explanation and demonstrate the need to move beyond the theory and substance of Haas’s arguments for a fuller explanation. First, whether scientific ecology actually provides a basis for environmental norms is open to question. Second, in terms of influence, epistemic communities of scientists have a mixed record. Science and “scientific ecology” certainly played a role in identifying environmental problems and influenced thinking in international organizations such as UNEP and the IUCN. Those organizations in turn helped to disseminate ecological concerns to state governments, NGOs and publics. Not surprisingly, science also played a role in supplying technical knowledge that helped in the formulation of some specific policies in response to perceived crises and in the face of uncertainty. So, an epistemic community approach does tell part of the story. However, it performs far less well on the core political issue of consensus on what should be the appropriate responses generally to global environmental problems. Consensus on the nature of environmental problems was often weak, particularly among hard scientists when it came to values, management norms, or specific responses in key cases. Also, most hard scientists came late, if at all, to development concerns.

That observation leads to the third problem -- taken up further in the next chapter -- that ideas behind sustainable development and the compromise of liberal environmentalism simply did not originate among scientists, ecological or otherwise. In fact, it appears the causal arrow

often ran the other way. Ideas around the norm-complex of liberal environmentalism appear to be increasingly influencing scientific work that feeds into global environmental research, rather than vice-versa.

The chapter begins with a brief discussion of the precise claims of the epistemic communities literature in order to clarify how evidence should be evaluated. Then follows a brief discussion of the science policy process in international environmental governance. The remainder of the chapter traces the influence of scientists, determines whether they constituted an epistemic community, and assesses the influence of such a group in the lead-up to and deliberations during the key norm-articulating events identified in chapter two (1972, 1987, 1992). By focusing on what scientists actually did, I hope to illuminate the interaction of science and global environmental governance rather than merely offer a critique of the epistemic communities hypothesis.

### **Explaining Norm Creation and Change With Epistemic Communities**

As a starting point, I assume that the ideas carried by environmental scientists mattered to some degree in international environmental governance. The very nature of global environmental problems ensures that technical expertise is called upon for understanding and action. It would be truly bizarre if scientists played no role -- akin to suggesting that agricultural experts played no part in influencing world food and agricultural programs or that medical doctors played no role in world health programs. The important question is, to what extent do expert groups determine the observed content of governing norms or specific policies those norms support?

The epistemic communities literature asserts that the success of ideas depends on whether *consensus* emerges within key groups of experts, “politically empowered through their claims to exercise authoritative knowledge and motivated by shared causal and principled beliefs.”<sup>4</sup> Accordingly, a high degree of consensus within the community makes the ideas it supports more likely to influence policy and to facilitate coordinated state action around such ideas. Low consensus diminishes the influence of the group and makes agreement on matters related to the community’s expertise less likely. Consensual knowledge embodied in epistemic communities

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<sup>4</sup>Haas 1992a, 41.

can help states identify interests under conditions of uncertainty, frame issues for collective debate, propose specific policies, and identify salient points for negotiation. Thus epistemic communities' activities can lead to international policy coordination and ultimately determine the content of governing norms and policies.

Haas argues that the influence of an epistemic community depends in part on its privileged access to officials and leaders of national administrations or international secretariats, or to its members joining such bureaucracies themselves. Membership in such organizations helps to ensure the institutionalization of ideas carried by the epistemic community and the socialization of governments to the norms promoted by the group.<sup>5</sup> However, the literature as a whole is somewhat ambiguous on the necessity of members of a community to actually become government personnel. Instead, it emphasizes that a group's influence stems from the legitimate authority granted to it by virtue of its expertise. Furthermore, an epistemic community's policy activities are driven by principled beliefs around the issue at hand. These two factors imply that epistemic communities should be considered autonomous groups, with their own set of interests and priorities. Whether or not epistemic community members are in or outside government, the literature emphasizes their autonomy from the governments they influence. According to Haas, "The members of a prevailing community become strong actors at the national and transnational level as decision makers solicit their information and delegate responsibility to them. A community's advice, though, is informed by its own broad worldview."<sup>6</sup> If governments manipulate the activities of such groups according to government interests, their autonomy is compromised and the analytic weight that can be attached to epistemic community influence is diminished.

The clearest substantive application of the epistemic community hypothesis to international environmental governance is Haas's argument that an epistemic community formed around a "scientific ecology" research program. Scientific ecology is "distinguished by its systems perspective on environmental, social and economic problems; reflecting a multi-sectoral approach and a normative commitment to environmental preservation." He further claims that

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<sup>5</sup>Adler and Haas 1992, 374.

<sup>6</sup>Haas 1992c, 4.

epistemic community members “sought to develop social laws from their understanding of the laws of nature.”<sup>7</sup> Thus, experts not only provided technical advice, which is undoubtedly true.<sup>8</sup> The argument further asserts that the legitimacy of the knowledge-claim led to political empowerment and the content of such claims, and “social laws” derived from them, shaped governance.

An epistemic communities hypothesis also goes beyond a simple argument that an influential network of interested actors promoted ideas they preferred. Otherwise, concepts from the comparative public policy and transnational relations literature would suffice. Concepts such as “policy network/community,” “advocacy coalition,” “issue networks,” or “transnational social movement organization” all identify networks of actors involved in a policy, either owing to their interest or because members of the group share a common policy enterprise. All these concepts, to varying degrees, might be adapted to international policy processes.<sup>9</sup> Haas distinguishes epistemic communities from such groups because community members not only share causal and principled beliefs and a common policy enterprise, their “authoritative claim to policy-relevant knowledge in a particular domain is based on their recognized expertise within that domain.”<sup>10</sup> Furthermore, epistemic communities are not mere purveyors of consensual knowledge. The consensual knowledge literature focuses almost exclusively on the uses of knowledge during negotiations. It pays less attention to the actors that carry such knowledge, their own goals and sources of legitimacy, or how such knowledge may affect interest-definition as an ongoing process outside of negotiations.<sup>11</sup> In contrast, the epistemic community hypothesis draws its power from the special status accorded to the community’s expertise, which gives it legitimacy. The focus on legitimacy of ideas gives the hypothesis its causal weight and analytic strength

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<sup>7</sup>Haas 1996, 27-28.

<sup>8</sup>For example, the inclusion of scientific advisory panels for a number of treaties has affected decision-making on technical matters.

<sup>9</sup>There is a large literature on many of these concepts. For brief summaries that touch on their transnational applications see Bennet 1991, 224-225, on policy communities and networks; Sikink 1995 on transnational issue networks; Smith et al. 1997 on transnational social movements; and Sabatier and Jenkins-Smith 1993 on advocacy coalitions.

<sup>10</sup>Haas 1992c, 17.

<sup>11</sup>For example, Rothstein 1984; and Sjöstedt 1994.

compared to other concepts. Epistemic communities are not united simply by interests, they form around specific knowledge claims and values that, to have force, must stem from those knowledge claims.

One should answer the following set of questions in the affirmative in order to have confidence in an epistemic community explanation: Was consensual cause-effect knowledge necessary for responses or action? Did knowledge come from an identifiable network or group acting with a particular value orientation? Was such a group autonomous from state actors (at least initially) and were they self-recruited? Did the group push states in a policy direction they might otherwise have not taken? And, have other intervening factors been discounted?<sup>12</sup>

Most commonly, scholars utilizing this approach attempt to explain outcomes on discrete issues, such as ozone depletion or whaling. Such studies can easily identify single research communities, measure community influence by following how individuals move into domestic bureaucracies, and delineate the ins and outs of all relevant negotiations. Given the time-frame and breadth of this study, however, such a detailed approach is inappropriate. Instead, as Haas does in more recent studies (which are the logical extension of the approach), I will use broader strokes to focus on key ideas and the access given to major players in the relevant scientific communities who might qualify as members of an ecological epistemic community. I will look at the influence of ideas they championed and their own activity over time to determine their influence.<sup>13</sup> To address the criticism that I have not carefully examined the influence of an epistemic community in a particular case, I use some detailed examples, most notably with respect to climate change.

In addition, it would be unfair to argue a mono-causal explanation for the broad expanse of normative evolution examined in chapter two. I would not expect an epistemic communities explanation to perform to the same standard as in a study of a specific treaty outcome or discrete environmental problem. However, the literature does assert that an ecological epistemic community holds a privileged position in the broader development of global environmentalism, indeed *the* privileged position. It does so because of its commitment to examining cause-effect

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<sup>12</sup>Haas 1992b; Haas 1992a, 44-45; and Haas and Haas 1995, 260.

<sup>13</sup>Haas 1996; and Haas and Haas 1995.

relationships through the scientific method, its allegedly holistic approach, and its commitment to environmental preservation. So it remains a worthwhile exercise to assess whether an epistemic community was either necessary or sufficient for the normative development noted in chapter two and, if not, then to make some observations about just what role science did play in the evolution of governing norms.

### **The Role of Scientists and Scientific Ecology**

Above I established what to look for to test an epistemic communities explanation. The next step is to identify the relevant community, the basic contours of the consensual knowledge within the community, and the values that knowledge promotes. These steps prevent loose formulations of who or what one calls an epistemic community and avoids simply including any interested party who shares a particular policy enterprise. Following that discussion, I briefly map out the process through which scientific ideas might influence international environmental policy.

#### *Scientific Ecology*

I begin with an assessment of Haas's assertion that "scientific ecology" dominated epistemic communities active in international environmental research. The assumption requires critical examination to avoid the circular reasoning that if outcomes reflect some ecological concern, they do so because of consensus within the relevant epistemic community on "scientific ecology." Complicating matters is the unclear relationship between ecological thought and scientific ecology. The latter simply studies how living matter interacts with its environment and is usually linked to methods of the natural sciences. Ecological thought, however, does not bear a one-to-one relationship with the scientific endeavours of ecologists. An examination of the work of ecologists suggests "scientific ecology" is an unlikely candidate to form the basis of epistemic consensus and values. Following that discussion, I identify the location of key scientific actors and organizations that could form the basis of an epistemic community for global environmental governance.

The problem of assumed consensus within the relevant epistemic community stems in part from Haas's definition of "scientific ecology," which implies a close relationship to systems

ecology. He further argues that this view dominated international discourse. A problem arises, however, because Haas attaches a specific set of values to ecology that is difficult to link directly to what ecologists actually do or what their findings suggest about norms for human behaviour. He offers a definition of ecology so sweeping that it posits a consensus on an ideal-type set of ecological values that groups together facts and values from a variety of branches of ecology and other disciplines. This ideal-type presentation masks sharp disagreements among ecologists, not to mention among many natural scientists who study environmental problems but do not necessarily subscribe to an ecological philosophical position. I will address each of these criticisms briefly in turn.

For Haas, Ecology “has been described as a framework that assimilate[s] other scientific disciplines.”<sup>14</sup> It does so because it studies the interaction of living (the biosphere) and non-living realms (the atmosphere, geosphere, and hydrosphere). So ecologists, who come from a variety of backgrounds, “share a common belief in the need for an holistic analysis that is sensitive to the possible feedback and synergistic relationships among a variety of variables.”<sup>15</sup> The ecology Haas describes most closely resembles ecosystem and systems ecology, the latter pioneered in the work of Eugene Odum and, to a lesser degree, his brother Howard. Haas may also have in mind earlier pioneering work of influential ecologists who took a holistic approach, such as Soviet geochemist Vladimir I. Vernadsky, one of the first to use the term biosphere and stress biogeochemical cycles to understand the interrelationship between living and non-living systems.<sup>16</sup> Key elements of system ecology include its emphasis on the ecosystem concept and the flow of energy through ecosystems, self-regulatory/functional properties of living systems, negative feedback loops, and a conception of nature as composed of “innumerable, partially overlapping systems.”<sup>17</sup> The holistic view Haas identifies clearly stems from this branch of ecology and, as I will show, writing in this vein did influence international scientific study of the Earth’s environment in the late 1960s.

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<sup>14</sup>Haas 1992a, 43.

<sup>15</sup>Haas 1992a, 43.

<sup>16</sup>See Hagen 1992, 64-65, 122-145. The classic text is Odum 1953. Ecosystem and systems ecology are not always considered the same, but are associated owing to Odum’s influential work.

<sup>17</sup>Hagen 1992, 131.



However there are two difficulties with focusing on systems ecology. First, some attempts to apply its insights to social and political systems were largely discredited within the broader ecological community because they suggested an extreme version of social control that appeared anti-democratic. Such a view seems to contradict the vision supposedly put forward by the scientific ecology epistemic community. Howard Odum's semi-popular Environment, Power, and Society<sup>18</sup> exemplified this trend. Early chapters on concepts of ecosystem ecology, systems modelling and the limits of industrial growth were highly regarded. However, Odum's application of his systems approach to politics and religion, and the simple control loops of his energy diagrams to explain voting, public opinion, taxes and even revolutions and war, suggested the need for a coercive system of social control, not the democratic choice he claimed to promote.<sup>19</sup> In general, systems ecology has been characterized by a strong management orientation that makes many environmentalists uncomfortable, especially when it comes to the global environment.<sup>20</sup>

The second problem is that the stark divisions within ecology that arose in the 1960s and 1970s do not inspire confidence that consensus existed on ecological ideas that supposedly informed thinking in transnational scientific communities. As one prominent ecologist who works on transnational environmental issues put it, "I know a lot of ecologists and if two of them share the same perspective, I will eat my hat."<sup>21</sup> The deepest and most acrimonious splits occurred just when ecology saw a huge increase in numbers of practitioners, money, and interest from governments and the public looking to it for insights into environmental problems. A complete history is not possible here, but some basic aspects merit highlighting. For example, the main split came from population ecologists who challenged the holistic approach of the Odums, opting instead for a more evolutionary stance where individualistic competition determines the structure of a region's ecology and the evolution of species themselves. A series of more technical debates about the use of mathematical modelling and the like also arose. The

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<sup>18</sup>H. Odum 1971.

<sup>19</sup>Hagen 1992, 135; Bowler 1992, 540.

<sup>20</sup>Hagen 1992, 138-140; Finger 1993, 42; and Hawkins 1993.

<sup>21</sup>William Clark, author's interview. Note, Clark does not refer to himself as an ecologist, but was trained as one and works on international ecological issues.

splits were not merely disciplinary debates, but affected how ecologists saw the application of their discipline to human behaviour. As one historian of science puts it:

Many ecologists accept theoretical models that are quite explicitly opposed to the holistic perspective of the radical environmentalists. The development of scientific ecology cannot be equated with the rise of environmentalism, nor have the tensions between these two areas diminished in the modern world.<sup>22</sup>

Or, as another author observes, “Ecosystem ecology provided the ideal perspective for examining critical environmental problems, but for many evolutionary ecologists this perspective lacked an acceptable intellectual foundation.”<sup>23</sup>

Here the problem of values must be confronted head on. True, ecology as a system of thought does imply many of the values Haas identifies. For example, Tim Hayward lists three core values of ecological thought: live in harmony with nature (humans are a part of nature, not separate from it); overcome anthropocentric prejudice; and recognize intrinsic value in beings other than humans.<sup>24</sup> But Hayward harbours deep scepticism about the ability to derive these values from ecological science. “My conclusion, then,” he writes, “is that the normative regulation of human affairs cannot necessarily be derived from ecological insights, at least to the extent that they follow a logic which ecology is insufficiently equipped to illuminate....” Rather, an ecological lens has been attached to values that come from elsewhere.<sup>25</sup> Unsurprisingly, Bowler finds that ecology has been used as frequently by the industries that environmentalists criticize as by environmentalists themselves, each finding support within ecological science for their position – and controlled exploitation is as much a part of ecology as environmental protection.<sup>26</sup> Hence, Haas’s ultimate claim linking scientific ecology to environmental preservation as “an absolute end” is incorrect.<sup>27</sup>

Given these divisions, Bowler’s caution seems appropriate to keep in mind:

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<sup>22</sup>Bowler 1992, 536-537.

<sup>23</sup>Hagen 1992, 163.

<sup>24</sup>Hayward 1994, 31-32.

<sup>25</sup>Hayward 1994, 34.

<sup>26</sup>Bowler 1992, 536.

<sup>27</sup>Haas 1992a, 43.

The very word 'ecological' has come to denote a concern for the environment. In science, however, 'ecology' is merely the discipline that studies the interactions between organisms and their environment. History shows that such studies can be undertaken within a variety of different value systems.<sup>28</sup>

My critique makes no judgement on the merit of ecological values *qua* values. It only questions the claim that they arise as the epistemic community literature suggests, based on a scientific and normative consensus among ecologists.

One must be especially sceptical, then, of Haas's further claims which stretch scientific ecology into the socio-economic-political realm. One would be hard pressed, for example, to find within "scientific ecology" a consensus that the "ecological discipline...does not appear to reflect and reproduce patterns of inequality and dominance that may exist in domestic and international society more broadly."<sup>29</sup>

Haas's final claim has more to do with ecological thought than ecological science: "[Ecologists] do not view environmental policies in terms of opportunity costs, as some economists commonly do. Consequently, when involved in international environmental negotiations, they have encouraged behaviour that is different from previous patterns of collective action."<sup>30</sup> If that were true, one would have to conclude from chapter two that the ecological epistemic community has been only marginally successful. While environmental protection is certainly present in the complex of norms governing international activity on the environment, the goal of economic growth for human needs, albeit a more environmentally-friendly growth, remains paramount. Furthermore, environmental policies are indeed evaluated as much if not more by the costs and benefits of various actions than from the position of an environmental protection ethic as expressed above.

By contrasting environmental ecology to economics, Haas correctly points out the different values and assumptions of ecological thought and classical economic thought. The difference comes from environmental economics' basic starting point, consistent with classical economics, of valuing the environment to ensure the costs/benefits of human activity are properly

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<sup>28</sup>Bowler 1992, 504.

<sup>29</sup>Haas 1992a, 43.

<sup>30</sup>Haas 1992a, 43-44.

considered. The basic underlying value is that “taking care of the environment is in humans’ interest.”<sup>31</sup> But human interest is dependent on a prior set of values of what humans want and need, and hence comes from socio-economic and historical circumstances. The environment is instrumental, thus important, and ought to be brought into economic models.

Ecological values, as portrayed by Haas and as commonly understood in philosophical literature, imply a much more radical position with implications for the way policies ought to be framed. That perspective gives value to the environment as an end in itself, not related to its use by humans. The contrast is important to assess critically and accurately the source of ideas of environmental governance. Otherwise, it would be tempting to equate just any concern with the environment with the influence or success of a scientific ecology epistemic community. Scientific ecology does not reflect just any concern with the environment, and stands in contrast to fundamental tenets of the norm-complex endorsed by the Brundtland Commission in 1987, and certainly of liberal environmentalism as articulated at UNCED in 1992.

The scepticism with which one should treat the ideal-type epistemic community of “ecological scientists” does not completely discount the potentially important role of scientists more generally. Indeed, leading scientists at the cutting edge of global change research are generally not concerned about the philosophical or disciplinary perspective from which they come, but rather go where the science takes them.<sup>32</sup> Admittedly, the global environmental change science agenda as it developed in the 1980s, has increasingly focused on the interaction of biological, chemical, and geophysical processes and their relationship to human activity. But for most scientists, this has little to do with a particular value orientation, ecological perspective, or a conscious policy enterprise.<sup>33</sup> To simplify matters then, in the remainder of the chapter I focus specifically on the scientific communities most directly involved in global governance and ask first whether they represented a “scientific ecology” approach, and, second, what role, if any, they played in providing the foundation for international environmental norms.

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<sup>31</sup>Hayward 1994, 102.

<sup>32</sup>William Clark and Jim Bruce, author’s interviews.

<sup>33</sup>For these trends in global change research see *Ambio* 1994.

*The Scientific Community and the Process of Scientific Influence on Policy*

Caution is warranted in determining what group of individuals might be properly called a scientific ecology epistemic community. For example, simply counting Maurice Strong, Jim MacNeill, Peter Thacher, Mustafa Tolba,<sup>34</sup> and others who took leadership roles in key U.N. organizations and processes around environmental governance over the years would unfairly stretch the use of the term. Even though some members of this group have science backgrounds, others do not. Neither do some base their goals or values on cause-effect relationships in ecological science, even if they see the value of scientific research for environmental governance. This group, and its allies in domestic bureaucracies, might better be termed “knowledge brokers” -- intermediaries between original researchers and policymakers or those involved in the policy process -- or simply policy entrepreneurs.<sup>35</sup> Caution is also warranted when attaching analytic value to such labels, however, since “knowledge broker” still implies that the source of legitimacy for such a group rests on its use of scientific knowledge rather than the promotion of a particular set of values. While many key individuals used science to back their claims, it was not always primary in their attempts to influence others or shape the discourse around environmental governance. The epistemic community hypothesis, as I argue above, must therefore not merely focus on this group if it is to do more than identify like-minded influential individuals. An epistemic community consists of a group with particular expertise who draw on that expertise to formulate not only technical advice or scientific research programs, but goals and proposals that could potentially shape behaviour of governments or other groups who partake in governance structures.

To locate an epistemic community, I briefly map the terrain of environmental science and international environmental policy. Negotiation texts have begun to map out the institutional linkages in international environmental negotiations, including scientific inputs. However, scientific knowledge is only one small part of the overall process. As an illustration, I have

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<sup>34</sup>This is not an exhaustive list, but simply examples of individuals who led the way in promoting global environmentalism. Among other things, Strong served as secretary-general of the Stockholm and Rio conferences and as a commissioner on the Brundtland Commission, MacNeill was secretary-general of the Brundtland Commission and head of the OECD environment committee 1978-84, Thacher served as deputy director of UNEP 1977-1983 and occupied a number of roles in U.S. environmental diplomacy since the early 1970s, and Tolba headed UNEP from about 1977 to 1994.

<sup>35</sup>Litfin 1994, 4, 37-40.

reproduced a schematic map of the negotiation process for UNCED (see Figure 3.1). The diagram does not explicitly note scientific inputs, but many of the agreements and processes identified include scientific bodies or receive scientific advice.

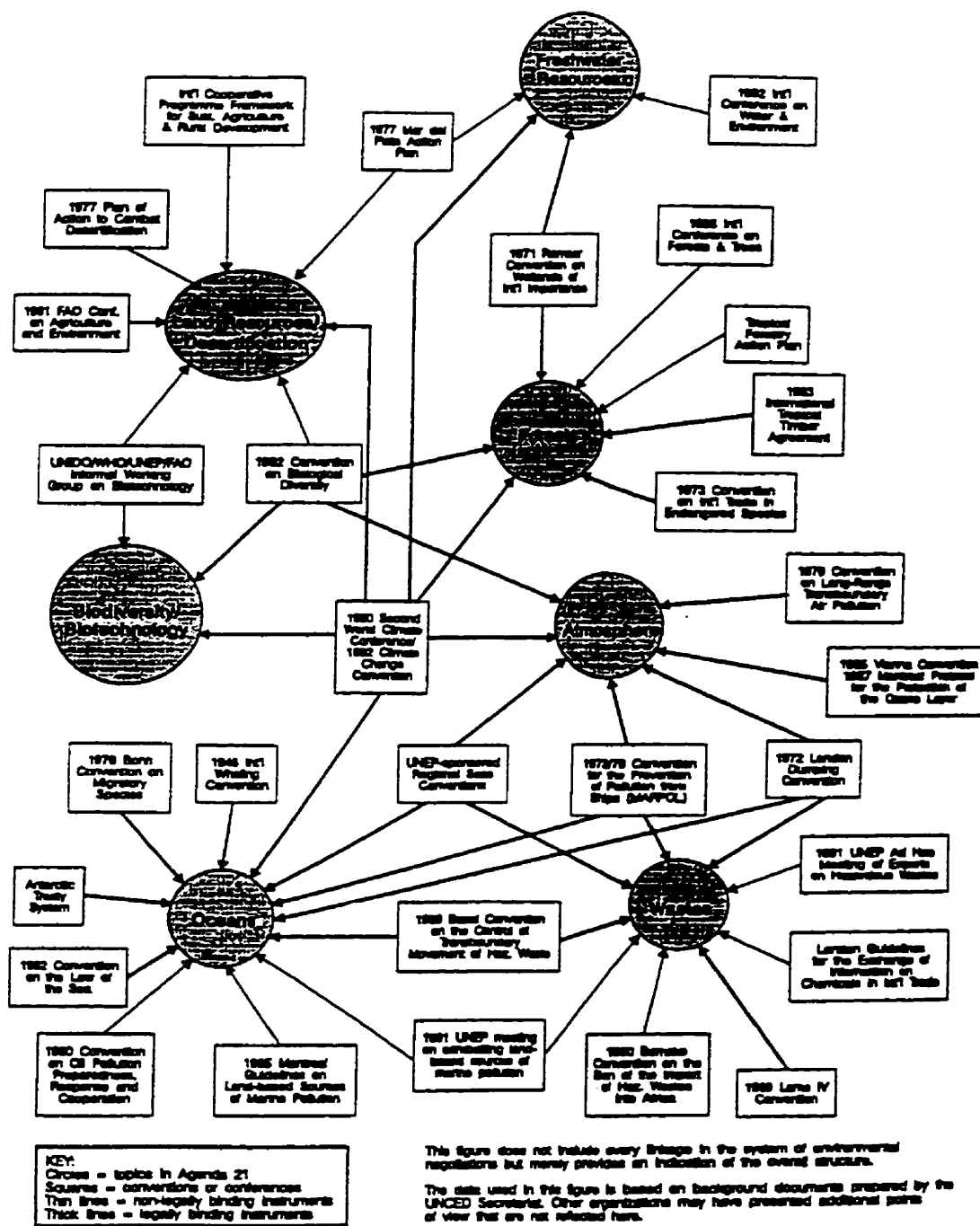
To identify the specific pathways of scientific influence, I turn to the science policy literature since it traces the influence of scientific ideas on policy and the policy process. Given the limited scope of this project, the following neither purports to be a definitive discussion of how scientific ideas move through international scientific networks, nor does it engage debates about how to improve the effectiveness of science in the policy process. Instead, I draw on the science policy literature simply to identify the key institutions and individuals involved in the complex web of international environmental research. This literature assumes that environmental policy originates with the identification of potential environmental problems by scientists. From there to a global response, usually in the form of an international agreement, can take as little as 10-15 years (in the case of ozone depletion, for example) to well over 100 years. Bo R. Döös provides a simple schematic diagram of this process. Like Haas, he suggests that the key determinant of the speed and quality of global response is the degree of scientific consensus. However, Döös focuses more than Haas on the difficulty in achieving such consensus given problems of observation, measurement, and prediction of human effects on the environment. He also identifies other complicating factors that include the difficulty in obtaining the required financial commitment and the tendency of governments to side with minority scientific opinions, supporters of which can argue that an insufficient knowledge base exists for action (see Figure 3.2).<sup>36</sup>

Of particular interest for the epistemic communities hypothesis is what happens between the third and seventh box (scientific consensus and political acceptance). Döös emphasizes that scientific consensus, while important, can be thwarted because governments may encourage negative feedback loops once the political process gets underway. Some philosophers and sociologists of science go further, arguing that the conduct of disciplinary scientific research can never be fully exempt from politics over the internal construction of knowledge and scientific activity. In this view, the broader context of scientific research always interacts with societal

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<sup>36</sup> Döös 1991, 4-7.

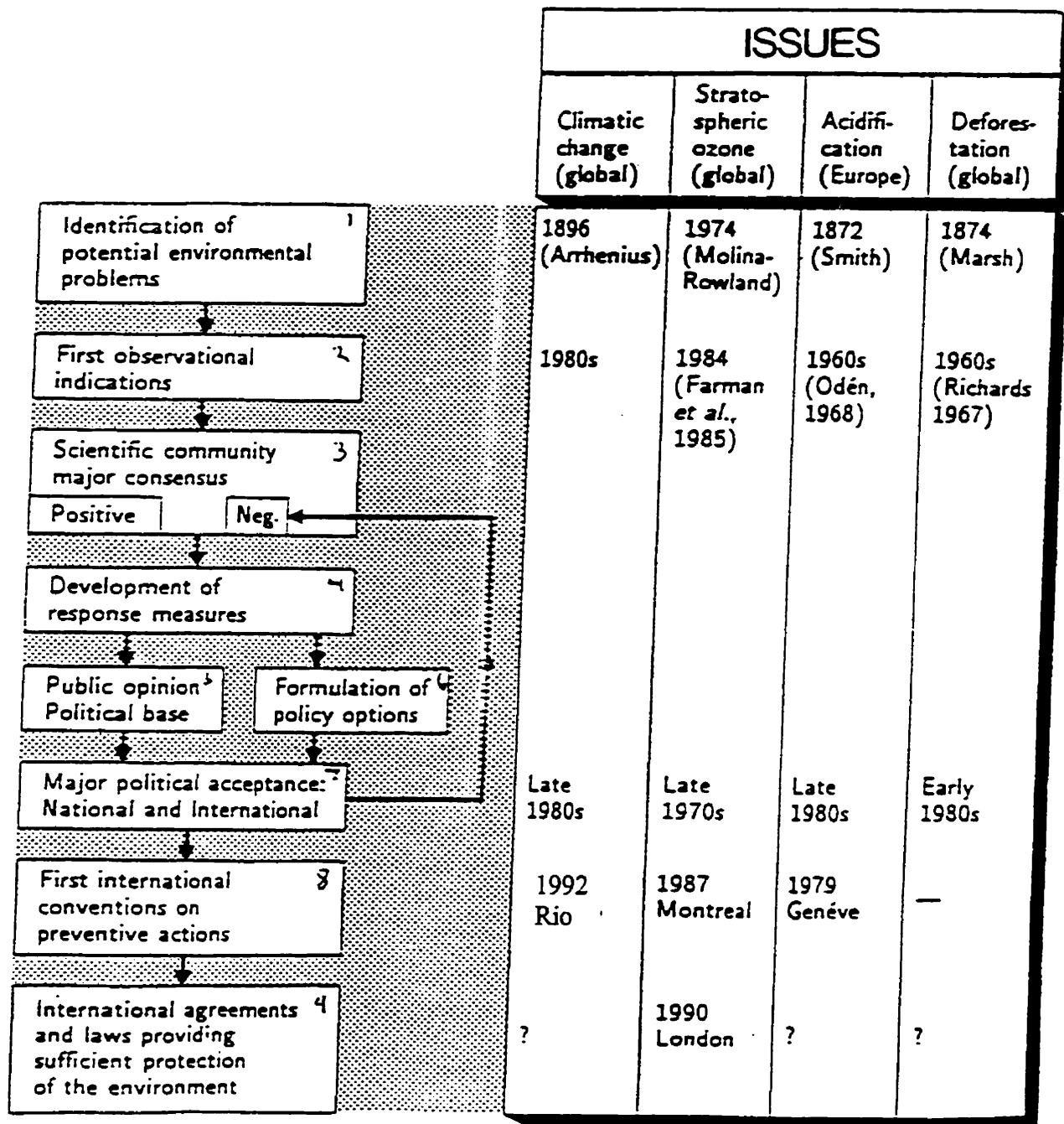
Figure 3.1<sup>37</sup>



### The System of Environmental Negotiations

<sup>37</sup>Reproduced from Chasek 1994a, 23.

**Figure 3.2: Schematic illustration of the complex and time consuming process of achieving sufficiently powerful and binding international agreements and laws for the protection of the environment.** <sup>38</sup>



<sup>38</sup>Figure 3.2 is reproduced with slight modifications from Döös 1991, 5.



and, in the case of policy-related science, governmental structures.<sup>39</sup> Whatever one thinks of the deep critique of knowledge construction, the question raised by Figure 3.2 remains -- how does the formulation of policy interact with an apparent scientific consensus? In other words, what happens in those boxes that leads not only to positive and negative feedback loops for action, but to the kind of action that is deemed appropriate? The epistemic community hypothesis in its pure form appears to posit a fairly linear relationship between scientific consensus and policy outcome, with only minor institutional hurdles to overcome. In other words, once a modicum of scientific consensus is achieved -- though it must navigate through national bureaucracies, convince leaders, and respond effectively to critics -- it should provide the substantive basis on which to build agreement. If the evidence supports a somewhat different understanding of what occurs between boxes three and seven, the hypothesis fails.

Now that I have established a simple schema for the scientific policy process, the next step is to locate an epistemic community. Over the range of environmental negotiations that require scientific inputs, the number of actors and their interactions make for a dense network of interactions and feedbacks that appears to make identification of an epistemic community daunting. For example, the Canadian Global Change Program identifies over 150 different research programs and organizations involved in Global Change activities, the majority of which involve scientific research.<sup>40</sup> While global change research is currently the most prominent international environmental research program, one could make similar lists for specific concerns, ranging from the big issues of biodiversity, forestry, or ocean pollution to a myriad of specialized environmental or conservation issues on the international agenda.

Despite the plethora of institutions, key umbrella institutions or groups closest to international environmental negotiations and policy processes can be identified. Influential non-governmental scientific organizations include, but are not limited to, the following: ICSU (International Council of Scientific Unions) and some of its prominent programs and member organizations such as SCOPE (Scientific Committee on Problems of the Environment) or IGBP (the International Geosphere-Biosphere Programme); IUCN (World Conservation Union which

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<sup>39</sup>For a detailed, but very critical, review of the new sociology of science see Bunge 1991.

<sup>40</sup>Canadian Global Change Program 1996, 91-94.

includes governmental and non-governmental representation); and IIASA (International Institute for Applied Systems Analysis) -- an east-west think tank and product of the cold war that does high-profile, interdisciplinary, and policy-relevant research on global problems. Some governmental organizations have also played central roles, such as UNEP, UNESCO, and WMO (World Meteorological Organization). The latter organization became associated more closely with environmental problems as atmospheric issues gained ascendancy on the international agenda. In any particular issue, particular organizations (or scientists within those organizations) assume leadership or coordinating roles and often organizations collaborate to create specialized bodies to conduct research on specific topics. For example, ICSU and WMO collaborated to create the Global Atmospheric Research Programme and then the World Climate Research Programme. Similarly, UNEP and WMO jointly sponsor the Intergovernmental Panel on Climate Change (IPCC). Of all these organizations, UNEP and IIASA probably best represent the value-orientation of "scientific ecology," although neither has used the label. As I will show in this chapter and the next, however, these organizations, especially IIASA, were not necessarily the most successful in influencing the content of policy. In addition, both organizations have themselves adapted their research to provide a closer fit with liberal environmentalism. These shifts did not stem from a changed understanding of cause-effect relationships in nature studied by ecological scientists.

With the backdrop of key organizations in mind, a process trace of the influence of scientific ideas and knowledge from these organizations (and individuals) can determine the strength of the epistemic communities hypothesis.

### **The Influence of Scientists and Scientific Ecology**

Scientists played a remarkably minor role in the lead-up to and activities of the three major norm-articulating events examined. Scientists had more success in bringing particular problems to the attention of governments and some environmental scientists helped shape ideas about international environmental governance through institutions such as the IUCN and UNEP. However, even within these ostensibly environmental organizations, environmental governance faced pressure to respond to development concerns and these organizations were unable to

develop ideas that successfully bridged that tension in order to forge a focal point for normative consensus.

*Science and Ecology in the lead-up to Stockholm*

Some of the environmental ideas that made their way into the Stockholm plan of action can be traced in part to UNESCO's 1968 "Biosphere Conference" in Paris. As much as any other attempt to coordinate global environmental action since, the Intergovernmental Conference of Experts on a Scientific Basis for Rational Use and Conservation of the Biosphere represented an ecological approach to global environmental problems and reflected concerns associated with ecosystem or systems ecology. Hence, had the conference set the pattern for environmental governance, then an epistemic communities hypothesis would find stronger support. However, it did not set the trend. Many of the environmental ideas that spurred global research and raised expectations among scientists fell into the background at Stockholm, except when it came to recommendations that dealt specifically with further research itself.

The Biosphere Conference did attempt to apply ecological ideas to the development process and bring environmental concerns to developing countries.<sup>41</sup> For UNESCO and IUCN, though, that focus came from the new development discourse among Third World countries, not from ecological ideas themselves. Still, systems ecology, with its emphasis on management of ecosystems, provided a way to move beyond traditional concerns of conservation and endangered species, which did not interest the U.N. Economic and Social Council.<sup>42</sup> The conference set in motion attempts by IUCN, UNESCO and other conservation organizations to develop ecological principles for development. These efforts came to fruition in statements such as the 1973 publication of IUCN's Ecological Principles for Economic Development.<sup>43</sup> Many of these ideas can be traced to a scientific ecology epistemic community involved in the International Biological Programme (IBP). Some members of that community directly participated in the Biosphere Conference, and the IBP had a major influence on thinking there, in particular its call for the establishment of an interdisciplinary and international programme of research on the

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<sup>41</sup>Caldwell 1990, 44-45; Adams 1990, 30-36; and McCormick 1989, 88-90.

<sup>42</sup>Adams 1990, 32-33.

<sup>43</sup>Adams 1990, 32, 143-145.

rational use of natural resources to deal with global environmental problems.<sup>44</sup> It should also be noted that the values expressed were much more anthropocentric than those put forward in the early environmental movement, and did in fact represent the management orientation of systems ecology more than a solely environmental preservation outlook.

The influence of the IBP, however, did not come from a consensus on a proper ecological approach *per se*, but on the support within the IBP for a research program that fit with global environmental concerns. These concerns drew especially from the Odums' work and from supporters who pushed systems ecology, at least in part, because they hoped it would raise the status of ecology to match more established disciplines such as molecular biology. Hence, although it had some other elements, "for all intents and purposes, [the IBP was] an international study of ecosystems."<sup>45</sup> The ecological community itself split in terms of support for the IBP, as many ecologists from a non systems perspective were suspicious of the "big science" orientation of IBP projects and its focus on ecosystem research (as opposed to evolutionary ecology, for example). Many prominent ecologists felt that large-scale ecosystem studies were not the best part of ecology.<sup>46</sup>

The most concrete outcome of the Biosphere Conference was UNESCO's Man and Biosphere Programme (MAB) launched in 1971. Mandated to study global relationships between human activity and the environment, MAB clearly took an ecosystem management approach and many projects it sponsored linked natural ecosystems and human use in single research projects. However, older nature preservation outlooks also remained, particularly in MAB's Project 8 which created "biosphere reserves." These reserves were often renamed areas already protected, did not really reflect ecological selection criteria, and did not succeed very well in creating protected spaces in developing countries.<sup>47</sup>

Scientific ecology did influence the organization of scientific research and framing of conservation concerns (especially of animals and plants) at the international level. However,

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<sup>44</sup>Adams 1990, 33. On the IBP see Hagen 1992, 164-188.

<sup>45</sup>Hagen 1992, 170.

<sup>46</sup>Hagen 1992, 172.

<sup>47</sup>Adams 1990, 33-36.

during this time period, most problems in practice were still treated as discrete problems of purely nature preservation or conservation, received a relatively low profile on the international agenda, and required relatively little coordination among states. The plans that came out of the Biosphere Conference, most notably MAB, remained largely removed from international governance (that is, the realm of state or other actors rights and obligations, regulation, and so forth). Hence, in the long run, those plans had a limited influence on governing norms.

### *The Stockholm Conference*

Scientists played a much greater role in the Biosphere Conference than at the U.N. Conference on the Human Environment at Stockholm. The latter reflected some ecological ideas, but mainly demonstrated the wide disjuncture between the concerns of scientists and of diplomats.<sup>48</sup> Scientists did not provide an ideational basis for the norms articulated at Stockholm and little consensual knowledge existed among the hard scientists who served as the main advisors to the secretariat or national delegations. Finally, at both the national and transnational level, scientists involved were more often reactive than proactive in conference preparations, with only a few exceptions.

Two isolated examples illustrate the haphazard way scientists did and did not influence events. The first is the fact, pointed out in chapter two, that Maurice Strong replaced Swiss biologist Jean Moussard as secretary-general in 1971 after it became clear that Moussard did not have the political savvy necessary to make the conference work. Although the reasons for the replacement go beyond Moussard's scientific background, it indicated the difficulties that scientists would face in maintaining primacy in bringing environmental concerns into the mainstream of the multilateral agenda, or shaping it.

Second is the story of Svante Odén, the Swedish scientist who almost single-handedly convinced his government of the need for an international conference to promote cooperation on acid rain. Despite virtually no training in atmospheric science, he successfully used his own theory to convince politicians and the Swedish people that lakes and rivers in Sweden were becoming acidic partly as the result of sulphur from smokestacks in other countries, adequate

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<sup>48</sup>Caldwell 1990, 44-45.

responses to which would require international cooperation. Largely as a result of Odén's efforts, Sweden proposed the Stockholm conference.

The scientific story on acid rain is telling because it worked in a way quite different than an epistemic community hypothesis would suggest. The earliest related research dated back all the way to 1661 when investigators in England noted that industrial emissions affected plant and animal health and that England and France exchanged windborne pollutants. The term itself dates to 1872 when a British official who monitored pollution wrote about increasing acidity of rain as one got closer to industrial centres.<sup>49</sup> The subject remained dormant for nearly 100 years until research programs started to examine the effects of acidity in precipitation on various living organisms. While a number of independent researchers studied related phenomena that would be brought together in later research programs, the interest of policy makers came mainly as the result of Odén, a soil scientist and advisor to the Swedish Government, who also happened to star in a popular television show. Odén was the first to publish a complete theory of acid rain, in which he linked air pollutants containing sulphur and nitrogen to increased acidity in rain that fell large distances away from their industrial sources. He also identified ecological consequences of acid rain that ranged from changes in the chemistry of lakes to accelerated damages to materials. Interestingly, Odén first published his theory of acid rain in 1967 in a prominent Stockholm newspaper, not a scientific journal (although the next year he published an article in Ecology Committee Bulletin that stimulated interest in the scientific community).

As a result of his work, Sweden sponsored a scientific study to try to determine the extent of the problem. It presented the study at the Stockholm conference, which then acted as a catalyst for expanded research programs in other countries. Odén's success stemmed from his personal access to policy makers, entrepreneurial efforts to spread word of his theory, and public popularity, rather than scientific consensus. This story, although it is but one example, lends little support to an epistemic communities hypothesis which emphasizes the need for consensual scientific knowledge. Instead, it illustrates the non-linear relationship between scientific knowledge and political action on the problems such knowledge addresses.

In terms of the broader issues of governance, the normative compromises that arose at Stockholm came largely independently of scientific input. Ideas that framed the conference

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<sup>49</sup>Kowalok 1993, 13-14. The following section draws on Kowalok; Munn 1992 and author's interview.

stemmed mostly from the entrepreneurial leadership of conference Secretary-General Maurice Strong who brought together strands of environmental and development discourse. Ultimately these compromises were political, but were facilitated by Strong's organization of two key meetings prior to the conference. These meetings helped forge a consensus among developing country economists that environmental protection could be accommodated, at least to some degree, while still making economic development a priority.

The first meeting could be considered as loosely comprising members of a scientific ecology community. The second, discussed in the next chapter, comprised members of the development community concerned about the environment (with some overlap). Strong himself ranks the latter meeting as being the more significant of the two in shaping the Stockholm agenda.<sup>50</sup> Even the first meeting did not involve ecologists as such, but people with related technical expertise who were sympathetic to the broad goals of ecology. The main link with ecology among the group was systems theory, which some ecologists had adopted. Three members of this meeting had been involved with the MIT team that worked on Limits to Growth, which used computer simulations grounded in systems theory.

Strong called the meeting shortly after his official appointment took effect in January 1971. He brought together five or six experts at MIT concerned with environmental issues, including Donella Meadows and Jay Forrester of Limits to Growth fame, Carroll Wilson who was also at MIT and one of the leaders of the Club of Rome, and Peter Thacher of the U.S. Mission to the United Nations. In a published interview, Strong said, "Basically, our objective was to entrench the issue of the control of the environment with the economic-development process, both in developing and industrialized countries."<sup>51</sup> Strong said a major theme was to move thinking about the environment beyond a simple concern with pollution to a view that looked at industrial society and its effects on the environment in more systemic terms.<sup>52</sup> That meeting produced the slogan that summarized the Stockholm mission: "to protect and enhance

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<sup>50</sup> Author's interview.

<sup>51</sup> Quoted in Herter Jr. and Binder 1993, 21.

<sup>52</sup> Author's interview.

the environment for present and future generations.”<sup>53</sup> The influence of the United States shows through in that this slogan essentially represented a conservation ethic already present in the U.S. National Environmental Policy Act (1969).<sup>54</sup> However, it presaged only the conservation side of sustainable development.

One scientific meeting did directly address the relationship between environment and development – a SCOPE working party meeting in Canberra, Australia (24 Aug. - 4 Sept. 1971).<sup>55</sup> ICSU set up SCOPE in 1969 to report on the “problem of the human environment that humankind is altering.”<sup>56</sup> The report by a Working Party on basic environmental issues in developing countries, composed mostly of scientists from Africa, Asia and Latin America, stressed the importance of what it called an “ecological approach” to environmental problems.<sup>57</sup> This approach would emphasize determining the “carrying capacity” of ecosystems, which depends both on plant and animal species, and the socio-economic values of the society. It thus supports the incorporation of ecological concerns into development planning decisions and owed much to ideas present in the IBP and that came out of the Biosphere Conference.

Strong attended the meeting, but said it had less influence on the conference secretariat and the agenda of Stockholm than the two meetings already mentioned. As Strong saw it, “the Canberra meeting was more of a scientific meeting discussing the broader issues in scientific terms, not so much trying to write the Stockholm agenda.”<sup>58</sup> The Canberra meeting mainly aimed to bring Strong and the secretariat up to speed on the scientific issues. Strong had been looking for a source of scientific advice and SCOPE fit the bill. So, he paid for the meeting after discussions with SCOPE Secretary-General Tom Malone (an American scientist), and SCOPE

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<sup>53</sup>Herter Jr. and Binder 1993, 21.

<sup>54</sup>Quoted in Jackson 1985.

<sup>55</sup>This meeting was part of the First General Assembly meeting of SCOPE, Aug 29 - Sept. 4. At the same meeting, scientists in SCOPE gave Strong his first scientific briefing on problems of the environment. ICSU 1971, 15-17; and R.E. Munn, author's interview.

<sup>56</sup>ICSU 1969, 25-32.

<sup>57</sup>SCOPE 1972.

<sup>58</sup>Author's interview.



became a key source of scientific advice for the conference.<sup>59</sup>

However, SCOPE did not really address problems of environmental management, virtually no social scientists were involved, and, although SCOPE aimed in part to bring together individuals from different scientific unions, consensual knowledge was not a key component of the exercise. Scientists from different disciplines often talked past one another, although some learning did occur as ICSU and SCOPE scientists tried to understand the language of scientists involved in IBP, for example.<sup>60</sup> Indeed, some scientists came to SCOPE from the IBP or MAB, although turf wars between government and non-governmental scientific programs were not uncommon.

Learning about development was more difficult, however, for many individuals within SCOPE. Most, including those in leadership roles, were (and are) hard scientists, uncomfortable with policy questions at all, and with a weak understanding of development concerns. Attempts at dialogue often went poorly because “the Third World and the hard scientists from Europe and North America hadn’t talked to each other and they didn’t really understand each other’s problems at all.”<sup>61</sup> That lack of understanding probably contributed to the limited influence of SCOPE in conference outcomes. Hence, although the Stockholm Plan of Action echoed many SCOPE proposals on research and education, the ecological approach was buried under the concern of developing countries for economic growth.

In official preparations for the conference and at the conference itself, science played a role mostly in technical matters, and this did help promote interest in environmental concerns. For example, a number of analysts have noted that the preparation of country reports on the environment had a positive influence on government interest in the environment and helped build domestic infrastructure, particularly in developing countries.<sup>62</sup> However, participating scientists did not constitute an epistemic community as such nor did the conditions identified by the hypothesis, such as scientific consensus, appear to be important for the impact they did have. In

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<sup>59</sup>R.E. Munn, author’s interview.

<sup>60</sup>R.E. Munn, author’s interview.

<sup>61</sup>R.E. Munn, author’s interview.

<sup>62</sup>Engfeldt 1973.

many cases, national scientists were brought into the process by governments, not vice versa. As one Canadian scientist put it:

The scientists in Canada I know took it as a big pain in the neck when [government] organized all these task forces and committees and it just meant that people couldn't get on with what they wanted to do. So they were drafted into these things. In fact they used to send petitions around that all political meetings like that should be cancelled for 10 years.<sup>63</sup>

Scientists also influenced discussions on the nature of environmental hazards and on a number of specific recommendations in the action plan.<sup>64</sup> Scientists were most successful with specific proposals on their own turf, such as with a SCOPE report that led to the creation of the Global Environmental Monitoring System, a component of the Earthwatch system that was one of the most significant concrete results of UNCHE.<sup>65</sup> These activities likely facilitated the strengthening of transnational environmental science research networks and the names of prominent scientists who participated in activities related to Stockholm often appear in later ICSU or other transnational research programs or activities.

However, as the conference preparations got under way, diplomats gradually took over from scientists in the formulation of policies and framing of global environmental problems. According to Lynton Caldwell, a long-time observer of and participant in U.N. environmental diplomacy, "There was conflict between science advisers and foreign policy advisers at Stockholm reflecting differing assumptions regarding the bases and priorities of international cooperation. These differences... were never wholly overcome."<sup>66</sup>

The most active scientists thought Stockholm should promote and institutionalize a planetary conservation ethic that would transcend national allegiances. Such a position supported the creation of mandatory rules in international law that could be enforceable directly

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<sup>63</sup>R.E. Munn, author's interview.

<sup>64</sup>For a summary of the role of scientists in some specific recommendations, see Thacher 1973; and Kellermann 1973.

<sup>65</sup>SCOPE 1971. According to Munn (author's interview), the actual funding proposal was written in one night after Tom Malone brought Munn and English scientist Gordon Goodman to UNEP headquarters and told them if they got a funding proposal on Maurice Strong's desk by 8 a.m. the next morning, they would get their money.

<sup>66</sup>Caldwell 1990, 62.

on individuals and transnational corporations.<sup>67</sup> However, the realities of international law and politics militated against this approach because it conflicted with sovereignty and rules that largely left the regulation of individuals and corporations to national laws, and governments were unwilling to relinquish freedom of action and control over domestic development. Scientists were particularly disappointed by the unwillingness of delegates to take a holistic approach. Instead, they displayed an overriding concern with maintaining sovereignty and what scientists perceived as short-term interests.

Perhaps that in part explains why IUCN downplayed the importance of the conference, even though it actively participated in the preparatory committees. The significance of the new perception of the position of developing countries and the environment was lost on IUCN, which in its annual review listed with enthusiasm the achievements of the Second World Conference on National Parks and adoption of the World Heritage Convention before its lukewarm appraisal of Stockholm.<sup>68</sup>

As a group, scientists felt disappointed with what they had achieved at Stockholm. The then executive director of the U.S. environmental committee of the National Academies of Sciences and Engineering summed up scientists' impact this way:

Despite this promising start (in preparatory activity) science never emerged in Stockholm in the role of a recognized, let alone equal, partner in a common enterprise. Although there had probably never been an intergovernmental conference in which science was accorded a larger and more direct share in the preparation as well as the outcome, this was hardly apparent during the Stockholm proceedings.<sup>69</sup>

### *Scientific Ecology and International Environmental Governance: 1972-1987*

The creation of UNEP and the leadership of Maurice Strong meant the ideas and scientific proposals that came out of Stockholm would immediately find a comfortable home within the United Nations. For example, Strong immediately provided money for the Global Environmental Monitoring System (GEMS) proposed by SCOPE, a program UNEP continues to

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<sup>67</sup>Caldwell 1990, 42.

<sup>68</sup>IUCN 1972 Yearbook, 20, quoted in McCormick 1989, 98.

<sup>69</sup>Kellermann 1973, 485.

fund. However, Strong's leadership also assured that the overall norm-complex of Stockholm, which included the mix of development concerns and state sovereignty in addition to environmental protection, would also guide scientific research and the framing of environmental issues.

Perhaps the high point in the influence of scientific ecology on this agenda came with the attempt to entrench the idea of "ecodevelopment" within UNEP. This attempted "marriage" of ecology and economy did not come from the science of ecology, so it could not really be said to have arisen from an epistemic community in its purest form, but it did attempt to stay close to the ecological values of systems ecology. While ecological ideas clearly influenced ecodevelopment thinking, ecodevelopment did not translate into great success in shaping governing norms because it sold poorly in developing countries and could not forge a broad-based normative consensus.

Note also that Maurice Strong, who coined the term while head of UNEP, said the single biggest influence on his thinking about ecodevelopment was Ignacy Sachs, a French development economist, whom Strong credits with giving the concept intellectual content.<sup>70</sup> I do not mean to suggest that UNEP did not try to incorporate ecological principles in its programs. For example, its regional seas program certainly did,<sup>71</sup> but the focus on ecological principles tells only part of the story. The main orientation of efforts to shape how the international community would respond to environmental threats stemmed from the attempt to mix ecology and development, which did not come mainly from a scientific ecology community.

Furthermore, UNEP as an organization had only limited success selling ecodevelopment in the developing world, because it was perceived as laying too much emphasis on the ecological side of the agenda.<sup>72</sup> UNEP could not forge the necessary North-South consensus or alliances among key state or institutional actors to create a normative focal point for environmental governance.

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<sup>70</sup>Author's interview. For Sachs vision of ecodevelopment, see, for example Sachs 1977, 1984.

<sup>71</sup>Haas 1990.

<sup>72</sup>I discuss the failure of ecodevelopment further in chapter four.

The World Conservation Strategy attempted to use the term “sustainable development” to overcome these difficulties, but had only limited success in shaping overall governance structures, further demonstrating the limitations policy-oriented scientists and environmentalists worked under. The final strategy focused on conservation of living resources, although some sections did mirror ecodevelopment thinking.<sup>73</sup> As chapter two indicated, at bottom WCS argued that development, since it alters the biosphere, must take conservation into account to be sustainable. The solution, then, is to give conservation a higher priority.

The WCS undoubtedly contained some ecological ideas, though it did not fully overcome its conservation orientation. That the final strategy contained the focus on development it did, resulted from consultations and negotiation on a second draft among delegates from developing countries at the IUCN 1978 General Assembly in Ashkhabad, USSR. The revised draft then went through consultations with UNEP, WWF (its co-sponsors), FAO and UNESCO.<sup>74</sup> Despite the compromises and influences from these various constituencies, it never overcame its lack of attention to the main concerns of developing country governments, nor did it take into account the essentially political nature of development nor the social production of nature.<sup>75</sup> The IUCN leadership had difficulty with its own constituency in getting development on the table. So rather than re-casting the debate, it tacked development concerns onto the traditional conservation agenda. But, the more that ecological ideas dominated that seemed insensitive to the above concerns, the more WCS seemed to reflect old environment and conservation thinking of the 1970s to many analysts.<sup>76</sup> The perceived ecological focus decreased the likelihood that WCS would make a long-term impact. Ecological ideas had to be substantially re-cast before they could provide a pillar for international environmental governance.

### *Science, Ozone, and Global Ecology*

While environmental and conservation-oriented international organizations struggled to

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<sup>73</sup>For example, see sections 10.4.d and 13.4 and .5 on public participation in development planning and 14.10 and .11 on traditional knowledge in rural development.

<sup>74</sup>McCormick 1989, 162-170.

<sup>75</sup>Adams 1990, 50-51.

<sup>76</sup>Adams 1990, 50-51; and McCormick 1989, 165.

find the proper meshing of environment and development concerns, some transnational scientific communities did achieve major successes in raising the profile of global environmentalism. In particular, the rise in prominence of atmospheric science research programs -- although many were U.S.-based and not transnational until much later -- helped raise the alarm over the threat of ozone depletion and climate change.<sup>77</sup> UNEP, WMO, and ad hoc intergovernmental bodies set up to study and report on ozone depletion also played important roles in promoting international action and raising the profile of global atmospheric science.

A number of analysts point to the ozone debate and action as a defining moment in the shift to truly global environmental concerns and have commented on the advent of global ecology starting around this period.<sup>78</sup> At least one author attributes this trend in part to the influence of atmospheric chemists, geologists, oceanographers, and climatologists who helped define a new type of ecology called "global ecology."<sup>79</sup> Whereas atmospheric scientists, climatologists and other scientists involved in global environmental issues gained higher profiles and larger research budgets as attention turned to global environmental concerns, the question still remains whether they actually shaped how such problems would be addressed. The evidence shows that even in most-likely cases -- such as international action to prevent ozone depletion -- an epistemic community hypothesis achieves only mixed success.

Most observers consider the Vienna Convention and Montreal Protocol to combat the depletion of stratospheric ozone the results of the most successful diplomacy to date to solve a highly technical international environmental problem. The case is a most-likely candidate for an epistemic community explanation since knowledge about the problem, its sources, and detection depended wholly on advanced science. Yet scientific consensus did not appear to be a major factor in getting political action; scientists themselves did not seem to push for a clear set of ecological values; and scientists virtually ignored the North-South dimension of the problem which became crucial to the long-term success of the treaty and to the broader normative structure of environmental governance to which the ozone issue contributed. For example,

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<sup>77</sup>The United States especially dominated research on ozone depletion. Haas 1992d, 193.

<sup>78</sup>Sachs 1992, 1993; and Hawkins 1993.

<sup>79</sup>Finger 1993.

scientists were not important actors in introducing provisions to allow longer phase-in times for developing countries or in the process that led to the 1990 London Amendments to the Montreal Protocol that created the Multilateral Ozone Fund to help developing countries phase-out ozone-depleting chemicals.

Only rarely does a community of experts first establish consensus and then mobilize public policy. More typically, research programs on an issue will go on independently until a handful or even one entrepreneurial piece of research (or individual researcher) manages to start putting theories together, garners media attention, or catches the ears of policy makers. The common pattern is then that the initial flood of public attention produces more money for research and only then may a scientific consensus begin to build.<sup>80</sup>

In this regard, the story of getting the attention of the U.S. government on ozone is not dissimilar to the acid rain story mentioned earlier, with the exception of its relative quickness -- scientific research about human-induced ozone depletion only started around 1970.<sup>81</sup> At that time, large-scale research concentrated on the potential threat of supersonic transports (SSTs). Some scientists feared that the release of nitrogen oxides and water vapour might deplete ozone in the stratosphere, the protective layer of atmosphere 10-50 kilometres above the Earth's surface where most ozone is found. This ozone layer protects the Earth's surface from ultraviolet radiation. These concerns led the U.S. Senate to terminate funding for a planned fleet of 500 SSTs (a Boeing project), despite a prominent study that concluded that ozone depletion from SSTs would be insignificant.<sup>82</sup> Large scale transnational research also occurred, but concern quickly shifted to the ozone depleting potential of chlorine as SST programs were cut or scaled back. The new concern came from research by NASA scientists on possible effects of the space shuttle's rocket boosters, which would directly inject chlorine into the stratosphere. However,

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<sup>80</sup>Kowalok 1993.

<sup>81</sup>Unless otherwise noted, information on the scientific history of the ozone issue is drawn from Kowalok 1993; Litfin 1994; Brodeur 1986; and Rowlands 1995a, 43-64.

<sup>82</sup>Interpretations vary on the policy effects of the report from the U.S. government sponsored Climatic Impact Assessment Program, which involved more than 1,000 scientists from 10 countries, and on the precise reasons for the cancellation. Rowlands, 1995a, 45-46, argues that the report was open to wide interpretations because its executive summary, on which policy makers relied, focused on the minimal threat from a small fleet of SSTs and the report made only oblique references to more severe consequences in scenarios found elsewhere in the report. See also Litfin 1994, 62; and Kowalok 1993, 17.

for political reasons, NASA scientists downplayed the threat from the shuttle and instead emphasized the threat from volcanoes, which left some scientists puzzled as to the concern since they did not see the danger for lack of a major source. Then, in 1974, F. Sherwood Rowland and Mario J. Molina's famous article in Nature identified chlorofluorocarbons (CFCs) as plentiful sources of atmospheric chlorine. Thus, a source of concern had been found, and an entirely synthetic one at that.<sup>83</sup>

What got the ear of government, however, was not activity by scientists *per se*, but a front page article in The New York Times following a meeting of the American Chemical Society where Molina and Rowland presented their data. Their paper warned that predicted ozone loss could lead to significant rises in the incidence of skin cancer and possible crop loss. The Times article was followed by extensive national television coverage that prompted more letters to Congress than any other issue since the start of the Vietnam War.<sup>84</sup> After the public outcry, the U.S. government funded further large-scale and coordinated research efforts. What happened next in terms of policy responses is well documented elsewhere. For the purpose here, the significant pattern in U.S. regulation (starting with bans on the use of CFCs in non-essential aerosols) is that it consistently outpaced scientific consensus on the extent of the problem until the late 1980s. Only then did the transnational scientific consensus on the causes of ozone depletion become more solidified.

However, it should also be noted that some government scientists did promote a precautionary stance despite uncertainty, at odds with the chemical industry. For example, Russell W. Peterson, chair of the President's Council on Environmental Quality in 1976, and formerly a chemist with du Pont for 26 years, argued that despite equivocal science, "chemicals are not innocent until proven guilty." He then argued for restrictions on CFCs.<sup>85</sup> However, the government acceptance of a precautionary stance waxed and waned depending on the leadership within key government bodies such as the EPA.<sup>86</sup>

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<sup>83</sup>Molina and Rowland 1974.

<sup>84</sup>Brodeur 1986, 70.

<sup>85</sup>Brodeur 1986, 74.

<sup>86</sup>Brodeur 1986; and Litfin 1994, 61-73.



At the international level, the ozone issue represented a defining moment in global environmental cooperation and seemed to demonstrate the ability of science to influence global governance more generally. The interaction of science and policy in reaching agreement on the Montreal Protocol on Substances that Deplete the Ozone Layer has also been well documented elsewhere.<sup>87</sup> Here, I will only comment on those findings as they relate to the question of whether epistemic consensus was the main driver of policy in terms of both getting action and the type of action received. I will also discuss the broader implications of the community's activities for governing norms more generally.

No author questions that science played an important role in creating an international ozone agreement since expertise was a necessary condition for identifying a decrease in concentrations of invisible stratospheric ozone.<sup>88</sup> However, the influence of scientists on policy did not work in the way an epistemic community explanation would suggest. Neither did an epistemic community influence general governing norms, with one important exception: the Precautionary Principle. Even in the latter instance, the principle did not stem from cause-effect relationships inherent in the study of ozone depletion.<sup>89</sup>

Rowlands, for example, found some correlation between the level of consensual scientific knowledge on ozone depletion and international cooperation, but also noted a major anomaly in that the major international study credited with producing transnational consensus -- the Ozone Trends Panel Report -- did not appear until *after* agreement on the Montreal Protocol. The epistemic communities hypothesis suggests the former is a precondition for the latter.<sup>90</sup> Parson is more blunt: "it was not science, but bargaining, that determined the decisions adopted in Montreal. The 50% cut that was agreed to had no particular scientific prominence. Indeed, the

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<sup>87</sup>See Litfin 1994; Rowlands 1995a; Haas 1992b; Parson 1993; and Benedick 1991.

<sup>88</sup>In this sense, the epistemic community literature is certainly correct that knowledge of environmental problems is based on a scientific rationality view of the world. The ozone layer "is only available as an object of knowledge because of our scientific culture." Yearley 1992.

<sup>89</sup>Note, in support of a scientific basis for the precautionary principle, Lemons and Brown argue that precaution stems from a "holistic" approach to science as opposed to positivist, predictive science. The former -- because it is sensitive to complexity, uncertainty and interaction with other ecosystems and human activity -- focuses on avoiding type II statistical errors (false negatives). Traditional predictive science focuses on minimizing type I statistical errors (false positives). Lemons and Brown 1995, 20-21.

<sup>90</sup>Rowlands 1995a, 89.

distribution of expert opinion at the time seemed strongly divided.”<sup>91</sup> Litfin, in the most detailed test of an epistemic communities hypothesis on ozone to date, similarly argues that only after the treaty was signed did scientific consensus emerge, especially on the causes of the ozone “hole” over the Antarctic which became known in May 1985. Litfin is convinced that the “hole” played a major role in framing subsequent negotiations, even though delegates agreed not to consider the evidence or its cause.<sup>92</sup> Prior to that point, scientific data had been open to wide interpretations in terms of policy implications.

However, scientists in the U.S. EPA at a June UNEP/EPA conference in Leesburg, Virginia 1986 successfully moved the “terms of the dominant discourse toward precautionary action.” Although they did not promote any particular policy option, they moved the discourse by emphasizing the long atmospheric lifetimes of CFCs and long-term modelled predictions.<sup>93</sup> Ironically, the discovery of the ozone hole, which atmospheric models had not predicted, rather than undermining scientists’ legitimacy, strengthened the precautionary discourse because the models could no longer be relied upon. That uncertainty changed the framing of the scientific issue itself from one of ozone depletion to one of increasing concentrations of chlorine (which could be calculated without the use of atmospheric models, based on production data and atmospheric lifetime). Once framed in terms of chlorine-loading, a phaseout no longer seemed like a drastic proposal. Thus, Litfin concludes that the scientists were not the driving force, but that the framing of the issue by “knowledge brokers” such as EPA administrator Lee Thomas (a career bureaucrat trained in psychology) played more of a role. Thomas felt the risk and uncertainty of the ozone problem warranted a precautionary approach, a view driven by his orientation to risk, not science. Thomas successfully pushed this view over that of other officials with different orientations to risk, such as White House science advisor William Graham:

Graham looked at it from a purely scientific perspective, whereas I looked at it from more of a policy perspective. Where there was uncertainty, he thought we

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<sup>91</sup>Parson 1993, 60.

<sup>92</sup>Litfin 1994, 96-102.

<sup>93</sup>Litfin 1994, 91-92.

needed more research, and I thought we needed to be cautious. We just looked at the same thing and came to two different conclusions.<sup>94</sup>

Hence, even in the case of the precautionary approach, which did find its way into broader international governance, the values could not be directly derived from the science itself. In addition, NGOs probably played an equally prominent role in promoting the precautionary approach to ozone (and more broadly). For instance, groups such as the U.S. Natural Resources Defense Council, threw their support behind the chlorine-loading approach because it would lead to complete phase-outs.<sup>95</sup>

Nonetheless, prominent scientists did promote the precautionary principle here and elsewhere and should be credited in large part with giving legitimacy to this norm at UNCED. A prominent example of a highly respected scientist who easily crosses over with policy making is Robert Watson, a NASA scientist who chaired the 1986 WMO/NASA ozone assessment and replaced Bert Bolin to head the Intergovernmental Panel on Climate Change in 1997. Speaking about the implications for policy of ozone depletion, Watson emphasized that his main policy concern was the long time frame to reverse effects, “which means you could not wait for cause and effect to be fully established.”<sup>96</sup> He added that the same concern applies to the issues of biodiversity and climate change. However, these considerations clearly go beyond science, as they concern uncertainty itself and the implications of that uncertainty for economic conditions, security, and health. As Watson put it, “In all of these cases [ozone, biodiversity, climate change] it is an issue of how you make a policy judgement with significant scientific uncertainty. You simply can’t wait for all the information to come in.”<sup>97</sup> Even though this orientation to risk did not stem from scientific findings, it is fair to say that precautionary concerns did gain prominence as the result of the community of scientists involved in atmospheric issues; hence in

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<sup>94</sup>Lee Thomas quoted in Litfin 1994, 104, see also 72-73. Brodeur 1986, 78 notes that the previous administrator, Anne Gorsuch, took a very different view. She called the science “highly controversial” in her Senate confirmation hearings. She also said that there was a “need for additional scientific data before the international community would be willing to accept it as a basis for additional government action.”

<sup>95</sup>Litfin 1994, 99. On NGO support of precaution on other issues see Princen and Finger 1994, 20, fn. 81.

<sup>96</sup>Robert Watson, unpublished interview with Peter Berry, January 1996, Washington, D.C.

<sup>97</sup>Robert Watson, unpublished interview with Peter Berry.

this one respect there was an epistemic community that seemed to play a necessary leadership role.

As for ecological values more broadly, no one I interviewed indicated that a set of ecological values *per se* was widely accepted in transnational scientific communities, and those that did hold such values may have also valued other goals, such as economic growth. In Watson's view, the ozone issue is important because it potentially affects the quality of life, but his policy orientation does not stem from science itself. In an interview in 1996, he responded this way to a question about what values motivated him on the ozone issue:

...what we need to strive for is a high quality of life and within that it means good economic performance and a clean environment -- I believe just as our vice-president [Al Gore] believes you can have good economic growth and environmental protection. You have to handle them very carefully and together and one cannot be the afterthought of the other.<sup>98</sup>

Watson expressed this view well after the signing of the Montreal Protocol and the Brundtland and Rio processes. If anything, it suggests a learning process might have occurred among scientists as a result of those events.

#### *Science and the Brundtland Commission*

Whereas atmospheric science contributed somewhat to raising concerns about global environmental issues, the Brundtland Commission told the world how to think about them. The Brundtland Commission process, however, only reinforced the limited influence of the ecological scientific community on governance. Had the project of preparing a report on international environmental action to the year 2000 not been taken out of the hands of UNEP, science might have played a more central role, as it appeared to in UNEP's parallel report (discussed in chapter two).

As for the role of scientists in the WCED process itself, analyses and interviews suggest scientists were neither the initiators nor the driving force behind most of the recommendations, perhaps due to a mandate that focused more on values than physical realities. In particular, the conclusion that economic growth is needed and will not damage the environment did not come

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<sup>98</sup>Robert Watson, unpublished interview with Peter Berry.

from scientists nor was it based on a consensus on cause-effect relationships.”<sup>99</sup>

But perhaps the most telling anomaly for an argument based on the influence of a scientific ecology epistemic community is the lack of influence of IIASA. The Austrian-based institute sponsored the epitome of Haas’s version of a scientific ecology research program and contained nearly the ideal of a high-level transnational community of scientific experts. In 1982, IIASA undertook a well developed research program called “Ecologically Sustainable Development of the Biosphere” which brought together historians, engineers, geographers, environmental scientists, economists, management experts and policy people, to examine how to manage the interaction between development and environment.<sup>100</sup> The group involved was truly transnational owing to IIASA’s stature as one of the only places where natural and social scientists from east and west interacted; it conducted policy relevant and cross-disciplinary work; and William Clark, the Harvard ecologist who headed the program, saw IIASA as perfectly suited to take advantage of burgeoning research from many sources and countries around global environmental problems. Clark describes the potential he saw for the IIASA this way:

The IGBP [now at the centre of global change research]... was beginning to take form at that time and there were other ventures internationally. It just seemed to me that there was a niche... for a couple of years in which IIASA might really be able to be a forum in which the relevant natural and social sciences and the relevant countries, at least of the developed world, could jointly participate in trying to sort out what the research agenda underlying this notion of what we today see as sustainable development might be.<sup>101</sup>

Clark, incidentally, is about as close an approximation to Haas’s ideal-type “scientific ecologist” as one could get. He had training in ecology, his research experience ranged from detailed studies of rural development to regional ecosystems, and he had participated in a large-scale study with natural scientists on carbon dioxide, energy, and climate change. IIASA attracted him because of its systems approach. That meshed with his own belief that the issue of climate change, and global change research more broadly as it had been developed by natural scientists, was “so coupled to other issues of human development and other environmental issues that the

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<sup>99</sup>Timberlake 1989.

<sup>100</sup>Clark and Munn 1986. Munn 1987 lays out the intellectual framework for the environment program at IIASA.

<sup>101</sup>William Clark, author’s interview.

emerging notion of what is now called sustainable development” could be developed there. He felt IIASA’s strengths made it an ideal setting “to do global environmental issues in an integrated way.”<sup>102</sup>

However, Clark objected to the word “ecology” as a description of the sustainable development of the biosphere program he headed at IIASA, insisting that the word “ecologically” in the title of the program was a “bureaucratically imposed modifier” by IIASA management who represented sponsoring countries, not the work of the scholars involved. IIASA management feared the program branched too far into social issues which they felt was “inappropriate.” Clark did not share this concern since his entire project was meant to explore the “lovely ambiguity of the phrase sustainable development,” which meant that the interaction of society and the environment could be explored from both the natural and social sciences. He did not see it as a project centred in the discipline of ecology, except in the broadest sense of looking at the problem of sustainable development in the context of an integrated social-environmental system. The specific influence of ecology came only from notions he borrowed from his thesis advisor, ecologist C.S. Holling, such as “surprise,” “bounded stability,” or “threshold effects.” Such concepts are also linked to chaos theory, such as in its discussion of how ideas around small events can lead to large, unexpected changes.<sup>103</sup>

Given this focus, the IIASA program might seem a logical place to look for a broad scientific basis on which to frame the Brundtland Commission report. Similarly, one would expect that the team at IIASA might have sought out the Brundtland Commission if it acted in the way expected of an epistemic community representing a global change research program. However, neither occurred. Asked what interaction IIASA had with the Brundtland Commission, Clark responded:

I say with embarrassment, no, there was very little: We vaguely knew that the Brundtland Commission was working away... In ways that it’s hard for me to understand now how we could have been so unconnected. Not only was I not particularly aware of the details of what was going on, most of the scholars I engaged in the project weren’t... at that time

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<sup>102</sup>William Clark, author’s interview.

<sup>103</sup>William Clark, author’s interview. On the use of these concepts see Clark and Munn 1986; and Munn 1987.

we were obviously invisible to them -- hardly surprising -- and they were pretty invisible to us.<sup>104</sup>

Despite the direct relevance of this research, the Brundtland Commission only spent one day consulting with the project and at least some people at IIASA had difficulty relating to the concept of sustainable development as framed by the Commission. In the words of Ted Munn, one of the project's lead researchers and one of the few natural scientists who had been involved with U.N. processes previously and after: "We thought that as a North-South exercise it [WCED] didn't have much to do with us I guess. And the Brundtland report was not a prescription for action, it was rather a mindset or a dream of what might be without telling anybody how to get there. So it didn't bother me or anybody I know at all. It sort of operated on a different plane."<sup>105</sup>

Clark said that at the time there was very little communication between the community of researchers involved in the burgeoning global change research programs and the more political activities that emerged from the U.N. system. Those who worked on the U.N.-sponsored Brundtland Commission were "a very different line of people" than the scientists who tried to move environmental research toward an integrated global change research program: "We were just different people. And I think it has been in large part due to the Brundtland group that those linkages are stronger today."<sup>106</sup> Thus, Brundtland was the catalyst for bringing the work of scientists from organizations such as IIASA toward concerns of global environmental governance, not vice-versa as the epistemic community hypothesis argues.

Thus, the beginning of the major turn in environmental norms toward a more growth-oriented, Keynesian-style global management norm-complex seemed to occur largely independently of scientific ecology research programs. That is not to say that scientists did not provide technical information, nor that science or ecological ideas did not influence various recommendations of the Brundtland Commission. However, a unified scientific community did not appear to play a primary role in this turn of environmental governance and the weight of the

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<sup>104</sup> Author's interview.

<sup>105</sup> Author's interview.

<sup>106</sup> William Clark, author's interview.

Brundtland report did not draw its content, legitimacy, nor underlying value-orientation from the findings of a scientific ecology epistemic community.

Finally, another development following the Brundtland Commission report suggests that it will be increasingly difficult for epistemic communities to fulfil the requirement of relative independence from government interests. After 1987 and the re-birth of environmentalism on the international agenda, this time as a truly global concern, governments appeared to make a more concerted effort to rein science in rather than allow “free wheeling” scientists to dictate the environmental agenda.<sup>107</sup> In looking at the lead-up to UNCED, it appears that as global environmental research picked up steam, the fitting of such research into palatable forms of global governance became a prime concern of major states from both the developed and developing worlds. One thus finds systematic attempts – most notably in climate change, but in other issue areas as well – to re-take control of transnational research endeavours and the processes by which these projects fed into international policy formation.

### *Science and UNCED*

Transnational environmental research by 1992 was better funded and better organized than 20 years before. As I indicated earlier, transnational and international scientific organizations fed into many aspects of UNCED preparations. In addition, 130 countries submitted reports on the state of their environments, although experts other than scientists contributed to such reports on environment and development in each country or territory.<sup>108</sup> Individual scientists also played a role in UNCED, some serving as members of delegations and as participants in preparations of conference documents and agreements. Nonetheless, like Stockholm, formal scientific community involvement in UNCED was relatively small as professional diplomats and administrators dominated the U.N. negotiation process.<sup>109</sup> Scientific knowledge was requested and supplied, but the process shaped how science would be used, not

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<sup>107</sup>Jim Bruce, author's interview.

<sup>108</sup>Some discrepancy exists in the actual number of reports submitted. Haas, Levy and Parson 1992, 11, count 130 reports; IDRC 1993 lists 164 national and 13 regional reports; and Grubb et al. 1993, count 172 by UNCED, a number that rose to 190 by the end of 1992.

<sup>109</sup>Marton-Lefèvre 1994; and Haas, Levy, and Parson 1992, 33 fn. 11.



vice-versa. As the executive director of ICSU put it, Agenda 21, the blueprint for environmental action into the next century, “can be viewed as an instrument through which scientific knowledge was transformed into a uniquely U.N. frame of reference.”<sup>110</sup>

The most direct input of the scientific community came from ICSU, whom Maurice Strong invited to serve as the conference’s official scientific advisor. Its main recommendations came from a November 1991 conference on An Agenda of Science for Environment and Development in the 21st Century in Vienna (ASCEND 21).<sup>111</sup> Although participants read like a who’s who of transnational environmental science, the report came too late to have much influence in UNCED preparations which were already well underway. In fact, ASCEND 21 took place two months *after* the original deadline for chapter 35 of Agenda 21 on “Science and Sustainable Development.” The deadline was pushed back so the authors could revise the chapter based on ASCEND’s recommendations. Other outcomes related to science included Agenda 21’s chapter 31 on the “Science and Technology Community” and the Rio Declaration’s Principle 9, which promotes cooperation to increase national scientific capacities and exchanges of scientific and technical knowledge “for sustainable development.”

The ASCEND 21 report did express some policy positions, but mainly focused on recommendations related to implementation of research and observation programs; strengthening of interdisciplinary research and communication among the natural, engineering, health, and social sciences; building links between science and development agencies; and building scientific capacity in North and South.<sup>112</sup> Development concerns were not well integrated into the overall report and were largely ignored in the invited papers. One participant suggested that the problem in part stemmed from the difficulty most hard scientists at the conference had understanding how to relate development concerns to their work. Twenty years after Stockholm, ICSU still had little interaction with social scientists.<sup>113</sup> Thus, ASCEND 21 hardly represented a consensus on science

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<sup>110</sup>Marton-Lefèvre 1994, 171.

<sup>111</sup>Dooge et al. 1992. See also “Recommendations from Sigma Xi and ASCEND 21” 1992; and Marton-Lefèvre 1994.

<sup>112</sup>Dooge et al. 1992, 5-11.

<sup>113</sup>Interview of participant in the ASCEND conference.

and development except in the loosest sense of the word. The document suggests few participants thought deeply about this relationship.

Although ASCEND 21 recommendations stuck closely to the promotion of scientific activity, some policy-relevant themes stood out such as a focus on population and carrying capacity, consumption patterns, and a strong endorsement of the Precautionary Principle. The latter was seen as the proper response to the complexity of the Earth's systems and the uncertainty of the effects of human disturbances.<sup>114</sup> The issue of Northern consumption did receive attention during negotiations and developing countries successfully negotiated for the issue to be included in several chapters of Agenda 21. However, the final wording remained vague, with developed countries agreeing only to "take the lead in achieving sustainable consumption patterns" but not agreeing to specific proposals, targets, or mechanisms (energy efficiency guidelines, for example) to achieve the goal. Population had not been included in the original mandate of Rio and only made it onto the agenda at the behest of industrialized countries who wanted it paired with consumption issues. In the end, bargains over population and consumption patterns were not seriously negotiated by either North or South. The debate that did occur (mostly on consumption patterns) was politically charged and produced little concrete action that drew from ASCEND's work. ASCEND could hardly be credited with having influenced this debate since the G-77 had long used the strategy of shifting international environmental negotiations from a focus on population growth to a focus on consumption patterns in the North and had explicitly made it a part of its strategy for Rio from the start.<sup>115</sup> ASCENDS's support of the Precautionary Principle, as mentioned, had much greater impact as the principle made major inroads, although it had already become prominent in the ozone and climate change negotiations.

More generally, UNCED experienced the same uneasy relationship between science and policy that pervaded Stockholm. The scientific community seemed either too unprepared, unwilling, or unable to communicate effectively within the diplomatic setting of the conference. As a result, its message often got watered down or else became one of a myriad of non-

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<sup>114</sup>Dooge et al. 6-8.

<sup>115</sup>South Centre 1991; Porter and Brown 1994, 122; Arizpe, Costanza, and Lutz 1992; Grubb et al. 1993, 30-33; and The Economist 1992.

governmental voices with no particular special status. Susskind, for example, argues that these difficulties, among others, are typical of the impact of scientists on international environmental negotiations in most cases.<sup>116</sup>

As in the case of Brundtland, the specific example of IIASA also deserves special mention since Strong had hoped it would play a major role.<sup>117</sup> But, according to Strong, that influence never materialized:

IIASA had an opportunity to play a special part and they did not do it. They were a disappointment, to be perfectly honest. I've always been very convinced of the systemic nature of these issues and was trying to design in UNCED a framework in which the systemic nature of those issues could be clearly seen by policymakers, and also the points of effective intervention identified.... I thought that we had a great opportunity to demonstrate this.... They did not rise to the opportunity the way I'd hoped.<sup>118</sup>

This lack of influence by a one of the few candidates for membership in a scientific ecology epistemic community suggests that such a community, if it existed at all, had a limited substantive impact at UNCED, and little influence on governance norms or the framing of issues more generally.

The discussion so far should not suggest that scientific evidence was unimportant to UNCED, but rather that it was not the driving force behind norm creation nor the initiator of action. The broad shape of the norm-complex articulated in the Rio Declaration and Agenda 21 does not reflect the primacy of "scientific ecology" as the basis for agreement, and the Declaration in particular appears less concerned with environmental protection or ecological concerns than even the Stockholm Declaration. Agenda 21, while it incorporates insights and linkages identified by scientists, also reflects the environment and development mix of liberal environmentalism that did not come primarily from science. As at Stockholm, scientists achieved the most success on their own turf. However, much of the science used at UNCED came from governments and the secretariat commissioning reports, not independent influences by an epistemic community. Scientists were not particularly active outside of those limited roles.

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<sup>116</sup>Susskind 1994, 66-81.

<sup>117</sup>Strong 1992, 22.

<sup>118</sup>Maurice Strong, author's interview.

### *Science and Climate Change*

To be fair, one cannot measure the influence of an epistemic community by looking at conference preparations alone. Indeed, the power of epistemic communities can occur in their ability to frame the issues for negotiations rather than changing negotiation outcomes *per se* (although the latter position is often taken in empirical tests of the literature, where the community is credited with forming specific focal points for agreement). Hence, below I examine in some detail the influence of the scientific community in the lead-up and follow-through of international action on climate change that led to the signing at UNCED of the Framework Convention on Climate Change (FCCC). Space limitations prevent me from undertaking similar detailed analyses for biodiversity and forests agreements. Admittedly, the biodiversity case does provide some support for an epistemic communities hypothesis since the long-standing activities of scientists affiliated with organizations such as the IUCN and later UNEP did play an important role in promoting the biodiversity concept. Scientists also helped to define issues and propel bargaining to produce international action around the concept.<sup>119</sup> However, even on biodiversity, the area closest to traditional conservationist concerns, ideas that shaped the overall agreement included the range of norms discussed in chapter two that had little to do with the relevant science. Major debates in negotiations revolved around intellectual property rights and sovereign control -- debates that shaped the core normative basis of the treaty, making it a good fit with the broad normative contours of liberal environmentalism.

Climate change is an appropriate focus for a number of reasons. First, most analysts agree that climate change, although not even officially a part of the UNCED process, became a main galvanizing issue for action, and mirrored many core debates. It was also a central outcome of the UNCED process.<sup>120</sup> As such, many of the norms found in FCCC mirror those found in other UNCED documents negotiated at the same time. Second, climate change, especially as part of the broader agenda of global change, epitomizes a problem appropriately framed in ecological terms. Its very definition implies complexity, interaction of various environmental media (land, sea and air and the chemical, physical and biological cycles that link them) and their

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<sup>119</sup>Susskind 1994, 62. On the lead-up to the treaty see Brenton 1994, 197-206; Grubb et al. 1993, 75-84; and Boyle 1996.

<sup>120</sup>For example, Imber 1994; and Boehmer-Christiansen 1994c, 181.

relationship to human activity (anthropogenic change), and for solutions to take account of those interactions. It also represents, perhaps more than any other problem except ozone depletion, a truly global issue. In fact, climate change is often used interchangeably in practice with the umbrella research program of “global change,” which by the 1990s dominated global environmental concerns. Finally, although consensus appeared uncertain at times, the scientific community around climate change was well organized and mobilized in terms of promoting international action. Here I focus not only on how science worked in the negotiation and treaty process, but also on how much it influenced the form the treaty finally took, hence how it helped shape global environmental governance more broadly. The story is told more or less historically to show how scientific ideas about climate change made their way onto the international agenda.

The climate change case does show that scientists can affect international action on a highly technical issue. However, typical of other examples and the broad evolution of governance explored above, that influence did not work in the way the epistemic communities hypothesis suggests. There was no consensus on values of “scientific ecology,” early success in getting international attention did not translate into control over how the problem would (or would not) be addressed, and science eventually got moulded by the political process and normative structure as much as or more than it moulded them.

Fears of human-induced climate change are nothing new. Since the mid-18th century, scientists have arguably used this threat as one of the few effective instruments to persuade governments of the seriousness of environmental change. The so-called greenhouse effect (that naturally occurring carbon dioxide and water vapour keep the Earth’s temperature about 33 degrees C higher than it would otherwise be) has been known since the last century. The two concerns became linked when in 1938 G.S. Callender found higher concentrations of carbon dioxide in the Earth’s atmosphere than in the 19th century and that human burning of fossil fuels since the industrial revolution began could account for the differences. He also suggested that global warming might result, although his findings were greeted with much scepticism.<sup>121</sup> It took another 30 years for a sustained transnational research program, which began with the Global Atmospheric Research Programme (GARP) in the mid-1960s, a collaborative effort of ICSU and

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<sup>121</sup>Rowlands 1995a, 85-87; Grove 1991, 66-67, adapted from his article in *Nature* (May 3, 1990). For a history of climate change research, focusing especially on the United States, see Hecht and Tirpak 1995; and Victor 1995.

the WMO. UNESCO's Man and Biosphere Programme also researched the issue, which often overlapped with ozone research as the problems are related. However, political activity around ozone, until at least the late 1980s, generally ignored the links present in major scientific studies.

An epistemic community of sorts could be traced to these efforts as key personalities would later become involved in GARP's successor, the World Climate Research Programme (WCRP), ICSU's International Geosphere-Biosphere Programme (IGBP), and the Intergovernmental Panel on Climate Change (IPCC). A prominent example is Bert Bolin, who from 1988-1996 headed the IPCC, mandated since 1988 to advise governments, UNEP and WMO (its sponsors), and the United Nations system as a whole on climate policy. Governments also mandated IPCC to update, transmit and assess relevant scientific information and point out policy implications. The overlap in IPCC and global research bodies at senior levels is well documented.<sup>122</sup> In addition to climate scientists, the core group of researchers in these organizations and at IIASA included energy demand forecasters.<sup>123</sup> Figure 3.3 shows the interrelationships among these various research programs and the FCCC.

Yet again, IIASA deserves special attention for its long-standing involvement in the issue, although its direct influence on climate change policy is difficult to discern. However, Boehmer-Christianson suggests that the potential growth of influence of IIASA, especially through non-governmental groups, "possibly became threatening to some governments and governmental science, encouraging efforts to capture climate change research from the private sector," a task at which governments proved quite successful, as I explain below.<sup>124</sup> IIASA was one of the few organizations that explicitly linked climate change to "sustainability" broadly defined. Key members of the climate research community had connections to IIASA, such as William Clark, who headed up the sustainability project and delivered a key note address on policy at the Villach

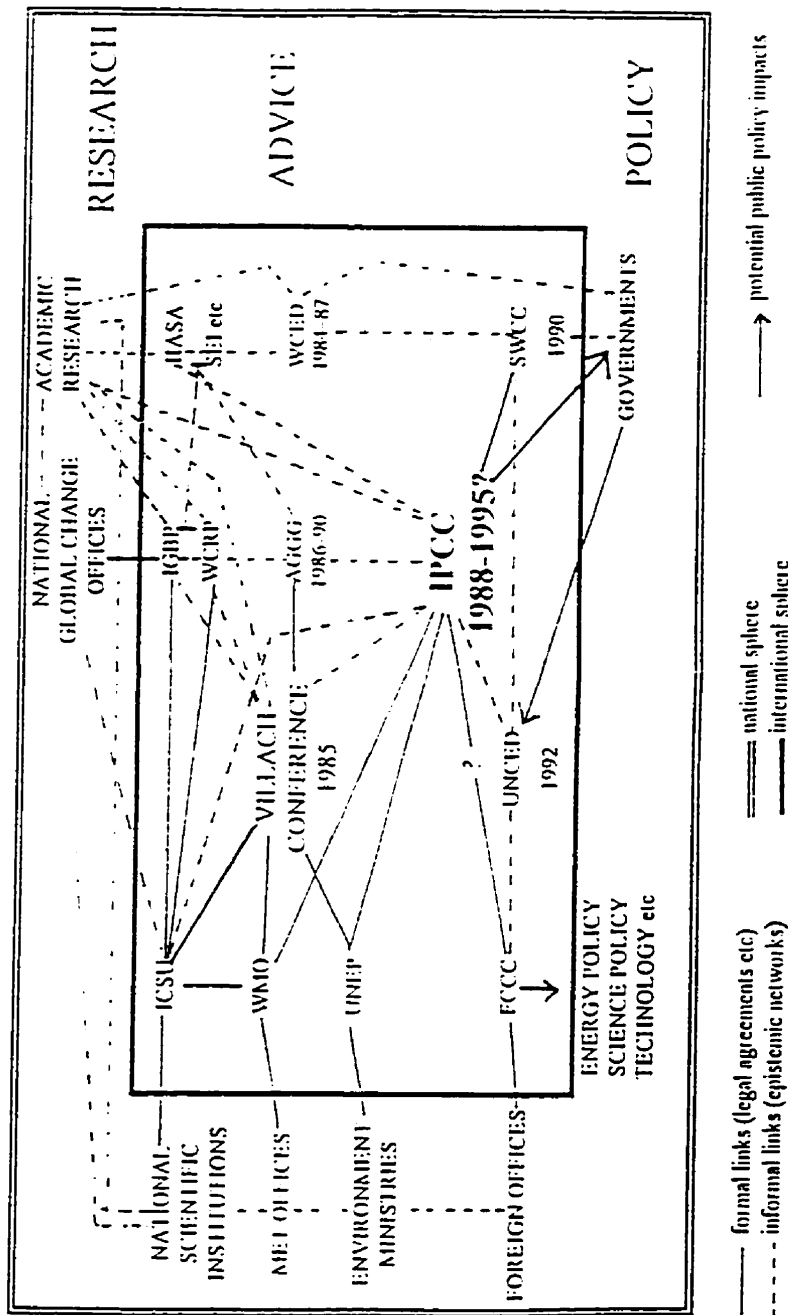
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<sup>122</sup>Boehmer-Christiansen 1994a, 146 fn. 22 cites, in addition to Bolin, Paul Crutzen, Sir John Houghton and Professor Yuri Izreal, who have served variously as WMO executive members, IPCC Bureau members and chairs of IPCC Working Groups, among other posts. However, more than one scientist I interviewed also mentioned bureaucratic competition between IPCC and WCP.

<sup>123</sup>Boehmer-Christianson 1994a. The combination of climate research and energy policy, especially in alternatives such as nuclear energy, is a key theme in Boehmer-Christianson's analysis.

<sup>124</sup>Boehmer-Christianson 1994a, 146.

**Figure 3.3: Institutions and their Functional Relationships in Climate Change Policy and Research.**<sup>125</sup>



<sup>125</sup> Reproduced from Boehmer-Christiansen 1994a, 143. The question mark under IPCC in the diagram indicates its uncertain status following the first conference of the parties in 1995. Despite the new work of technical bodies within FCCC, the IPCC appears set to continue as an “independent” source of policy-relevant science on climate change.

conference in 1985 that helped spur the scientific community into political action on the climate

change issue.<sup>126</sup>

The meeting in Villach Austria marked the turning point toward a sustained transnational

scientific research program aimed at generating international political attention. Although the first World Climate Conference had addressed the issue in 1979, the Villach conference marked the real beginning of efforts to build a scientific consensus.<sup>127</sup> The relatively late start to

consensus building was not owing to a lack of attention by scientists. On the contrary, since the mid-1970s, IASAA, the International Energy Agency, and even the OECD had held high profile conferences and raised concerns about climate change. Around the time of the first climate

conference, UNEP began to get involved and it was UNEP -- not WMO, which had most of the governmental science expertise on the issue -- that attempted to link climate change to

development policy. UNEP also encouraged SCOPE to consider such linkages in its research on the carbon cycle. UNEP head Mustafa Tolba, a botanist by training, encouraged this trend, but his concerns appeared to stem primarily from his political convictions and concern for the

developing world, not his scientific credentials or background. He had hard work ahead of him to bring scientific research around to this point of view.<sup>128</sup>

Villach pulled together high profile governmental and non-governmental scientists and

what might be called research brokers or science managers.<sup>129</sup> Jointly sponsored by UNEP,

ICSU, and the WMO, this conference represented the core of an epistemic community on the climate change issue. It also explicitly aimed to influence policy makers, a position in line with the general philosophy of all three sponsoring organizations. Other high profile transnational

scientific organizations gave institutional support, notably IASAA and the Beijer Institute (which

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<sup>126</sup>Note, while others identify Clark's as the paper that galvanized scientists into action, Clark himself downplays his role and attributes conference chair Jim Bruce's framing of the policy implications of climate change as the main catalyst. R.E. Munn and William Clark, author's interviews.

<sup>127</sup>WMO organized the 1979 conference to demonstrate success in its long-standing research program on weather forecasting so it turned to climate change, at least in part, to show atmospheric research still deserved funding. Subsequently, GARP transformed into the World Climate Research Program, with support from major interested states including The United States, Soviet Union, United Kingdom, and Canada. Author's interview, Gordon McBean.

<sup>128</sup>Boehmer-Christiansen 1994a, 155.

<sup>129</sup>Boehmer-Christiansen 1994a, 156 uses the term "science managers;" Litfin 1994 uses "knowledge brokers."



later became the Stockholm Environment Institute). Also present were high profile U.S. environmental organizations such as the Environmental Defense Fund and World Resources Institute, and national research institutes such as the two Max-Planck Institutes in Germany.<sup>130</sup> Jim Bruce, an Environment Canada scientist at the time, chaired the conference.

Villach came out with a strong, unified position that an unprecedented increase in global mean temperature could occur in the first half of the 21st century and a prediction that it would rise by 1.5 degrees C - 4.5 degrees C for a doubling of carbon dioxide. Most importantly, it recommended that science-based targets should be designed to limit temperature increases to 0.1 degrees C per decade.<sup>131</sup> This statement was much stronger than the IPCC report of 1990 on the policy side, although more cautious on the science. Thus its main emphasis was the high level of uncertainty and need for greater research. Apart from climate, research policies were to focus on R&D for alternative energy technologies and policies. Significantly, the one non-consensual document was Tolba's "agenda of action" which would have made UNEP the main centre for policy, while others present thought organizations such as IIASA were better placed to give policy advice.

Participants in that conference set up the independent Advisory Group on Greenhouse Gases (AGGG), whose members successfully promoted concern within the scientific community, among NGOs, and among some policy makers. AGGG also produced advice on energy issues. At the core of the group was indeed an epistemic community of environmental scientists concerned about the potential environmental impacts of human-induced climate change, although it also included energy-demand forecasters. Organizational support for AGGG came from ICSU, UNEP, and the WMO.<sup>132</sup> But the AGGG was short lived, its influence climaxing at a 1988 Toronto conference on "The Changing Atmosphere: Implications for Global Security" sponsored by the World Commission on Environment and Development. It became somewhat redundant thereafter with the creation of the IPCC later that year.

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<sup>130</sup>See Boehmer-Christiansen 1994a, 156, who lists key individuals comprising the network who remained major players in scientific research up to and including the IPCC process. Names that stand out include Bolin, Tom Malone from ICSU and WMO, Gordon Goodman from the Stockholm Institute, and Tolba.

<sup>131</sup>Bolin et al. 1986, xxi-xxviii.

<sup>132</sup>Boehmer-Christiansen 1994a, 140, 157.

Of course external events also influenced the attention climate change received. Economic factors included falling fossil fuel prices and growing fuel and energy technology competition which gave alternative energy suppliers (that is, not coal and oil) incentive to support climate change research and action. Political factors included the winding down of Law of the Sea and acid rain negotiations that had pre-occupied countries interested in environmental negotiations. Finally, external environmental events such as the discovery of the ozone “hole”, Chernobyl, and the hot North American summer of 1988 raised public concern about global environmental problems. Most of these factors had little to do with science.<sup>133</sup> Scientists who did raise concern often acted as policy entrepreneurs. For example, James Hansen, a NASA climate modeller, told the Senate Energy Committee in 1988 that “the greenhouse effect has been detected and it is changing our climate now” -- a statement that made front page news although no consensus existed on the causal relationship between the greenhouse effect and the hot summer.

The 1988 Toronto conference was the high-water mark of epistemic community influence and until then most Western governments viewed climate change as mostly a scientific and environmental problem.<sup>134</sup> The United States, however, from the start viewed the issue from a more economic perspective and through the lens of domestic policy. Thus, while other states primarily dealt with the issue through environment ministries, the U.S. administration set up its own committee of the White House Domestic Policy Council, having learned from ozone negotiations that the EPA and State Department might move more quickly than the White House desired. Although EPA had representation, the major players included the powerful departments of Energy, Commerce, and Interior, the Office of Management and Budget, and the Council of Economic Advisors.<sup>135</sup> The result was a policy position that emphasized measuring economic costs and cost/benefit calculations of environmental risk. Hence scientists were essentially outmuscled in U.S. policy making.

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<sup>133</sup>Bodansky 1994, 48; and Boehmer-Christiansen 1994a, 154.

<sup>134</sup>Bodansky 1994, 50.

<sup>135</sup>Bodansky 1994, 50; and Victor 1995, 365.

After the 1988 Toronto conference, governments became uncomfortable with the independent role science had come to play in the climate change issue. Hence, under pressure from the United States, WMO and UNEP set up the Intergovernmental Panel on Climate Change.<sup>136</sup> James Bruce, who chaired Villach and was secretary of the WMO Executive Council when they decided to set up IPCC, described the shift from the AGGG to the IPCC this way:

...after a couple of years of their [AGGG] work, there was an unease...that crept into some governments that this was an issue that was going to have enormous economic repercussions one way or another and they, in particular the United States, didn't like the idea of these free-wheeling scientists pronouncing on the subject. They preferred something with more governmental involvement. So in 1988 they advanced the idea [of the IPCC] at the WMO.<sup>137</sup>

Although the United States led the way, other countries also felt unease about "the sort of influence that a semi-independent group of scientists might have."<sup>138</sup>

In December 1990, governments also took the actual negotiations toward a convention out of the hands of the WMO and UNEP (unlike ozone, for example, which was negotiated under the auspices of UNEP) and put them into the hands of the U.N. General Assembly. Under Resolution 45/212 on Protection of the Global Climate for Present and Future Generations the UNGA set up the Intergovernmental Negotiating Committee (INC), handing over negotiations fully to diplomats and out of the hands of the IPCC, which still operated independently of the negotiations themselves.

Since the FCCC came into force in 1994, new subsidiary bodies that institutionalized the role of scientists further entrenched government control (biodiversity and other agreements contain similar bodies). Governments approve the scientists who sit on such bodies responsible for processes such as periodic reviews, evaluations of triggers for further action, monitoring, and joint research activities. Despite the importance of such functions, no guarantee exists that parties will accept the findings of such groups or abide by their recommendations since political pressure at home, for example, might lead them to usher counter scientific evidence, or use political or economic arguments to suggest alternative actions, no action, or the need for more

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<sup>136</sup>According to Gordon McBean, interagency competition also played a role. Author's interview.

<sup>137</sup>Author's interview.

<sup>138</sup>Jim Bruce, author's interview.

research.<sup>139</sup> The increasing level of government control also means such groups are unlikely to embark on independent initiatives in terms of shaping the overall governance structures, which have essentially been set for them. Actual allocative decisions or objectives, then, are not likely to stem from these bodies, though their findings may be used to suggest the need for swifter action, for example.<sup>140</sup>

The combination of these events served to compromise the independence of the climate change research community, which suggests it should no longer really be considered an epistemic community according to Haas's definition since members now consist of government-approved scientists. Bruce, although he defends the IPCC's scientific integrity, largely confirms how the role of science changed as the political stakes grew. One such change involved the replacement of natural scientists largely by economists in formulating policy options.<sup>141</sup> Nonetheless, the scientific community sees the IPCC as its main voice in politics and policy.

The two IPCC reports to date (1990 and 1995) also present a window through which to see the politics of scientific activity on climate change. The IPCC divided into three working groups. For the first assessment report, working group I provided the scientific assessment of climate change, working group II the impacts of climate change, and working group III response strategies. In the negotiations that led up to the climate change convention, the working group I report received the most attention, although its influence apart from warning about the problem was limited. It was also somewhat divided over its emission scenarios, the part of the report most likely to affect policy because projections on emissions are a necessary part of determining what kind of action would be required to prevent "dangerous" levels of increases in greenhouse gases (the objective of FCCC as found in article 2).<sup>142</sup>

Other significant recommendations came from working groups II and III on the need for more research into the sensitivity of "socio-economic" systems to climate change. Working

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<sup>139</sup>Susskind 1994, 65.

<sup>140</sup>Haas, Levy and Parson 1992, 10, make a similar point. For one of the only detailed studies of the role of such expert bodies on adequacy of commitments within treaties, see Deutz 1997.

<sup>141</sup>Jim Bruce, author's interview. The list of authors for working group III includes some natural scientists, but primarily prominent economists including David Pearce of the United Kingdom and nobel laureate Kenneth Arrow of the United States.

<sup>142</sup>Boehmer-Christiansen 1994a, 148-149.

group III also noted the lack of cost-benefit analysis or research on technological or market impacts of proposed solutions. The findings had little impact on the treaty process as working group III was largely ignored by policy makers, but findings proved significant for the future research agenda of IPCC.

As a result of the report, and pressure especially from the United States, which favoured cost-benefit analysis of environmental problems and was moving in support of market-based solutions, working group III was completely recast in 1992 to undertake the second assessment.<sup>143</sup>

Its new mandate focused much more on economic modelling, specifically to conduct “technical assessments of the socioeconomics of impacts, adaptation, and mitigation of climate change....”<sup>144</sup>

Whereas the original policy group consisted of a mix of scientists, engineers, and administrators, the new group was heavily stacked with economists, reflecting also the growth in the academic field of the economics of climate change. It also represented a shift in emphasis from technical solutions and opportunities favoured by countries such as Japan, to the economic costs and benefits of various responses and the policy instruments to best achieve them.<sup>145</sup> Significantly, other social scientists (political scientists, sociologists, geographers, and so on) were not generally selected by governments, hence the report has little to say about socio-political factors such as societal stresses, changes in government, institutional adaptation and so on.

Although it has been the object of some controversy over subjects such as differential costing of lives in developed and developing countries, the 1995 findings of working group III have generally received more attention by policymakers than the 1990 report.<sup>146</sup> The impact seems likely to reflect the orientation of the report’s more economic rather than ecological approach to policy.

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<sup>143</sup>Note, Elizabeth Dowdswell, a Canadian who later replaced Mustafa Tolba to head UNEP, is credited with the idea to revamp working group III. Dowdswell’s background is primarily as an administrator/bureaucrat, first in the Canadian government and then UNEP, unlike Tolba who gained a reputation first as a scientist.

<sup>144</sup>IPCC 1995, Working Group III Summary for Policymakers, 1.

<sup>145</sup>Gordon McBean, author’s interview. When WMO set up IPCC, Japan sent representatives from MITI, not hard scientists, and expressed a desire to get involved on response strategies because it saw opportunities as a leader in solar cell and other alternative energy technologies.

<sup>146</sup>When controversy erupted over these figures, they were removed from the summary report, although they remained in the actual chapters. For brief notes on the controversy, see “Heating up the Climate Change Debate” 1996; and Wysham 1994.

The motivation of lead researchers on climate change, a main component of the epistemic communities hypothesis, is difficult to determine in aggregate. Interviews and documentary evidence suggest that many shared causal beliefs about the nature of global change, but consensus on principled beliefs or a desire to “develop social laws from their understanding of the laws of nature” finds little support.

Boehmer-Christiansen, in her extensive study of the climate change policy process, argues that the coordinated research community “acted primarily as a lobby for its own research agendas dedicated to the modelling of planet Earth and the development of alternative energy sources.”<sup>147</sup> She also notes that the IPCC’s Updated Opinion for UNCED was more cautious than the 1990 report, emphasizing much more the uncertainty and need for further research. Expensive technologies for modelling, the performance of which in large part drove the success of the climate research in the mid-1980s, perpetuated this need. Other research programs related to energy forecasting, for example, also used climate change to convince governments of policy relevance at a time when fossil fuel prices were dropping. Boehmer-Christianson argues that scientific bureaucracies used climate change to convince governments of policy relevance and the need for further research at least in part as a way to gain public money (even at the expense of increased government control) to fund these programs beyond the means of the private sector. Most other literature simply notes that entrepreneurial efforts, particularly stemming from the Villach meetings, increased concern among scientists and policy makers on the potential effects of climate change.

Evidence also suggests that splits existed in the scientific community on what scientific findings meant in terms of policy implications. Also, many scientists, even the most active such as former IPCC chair Bert Bolin, have expressed reluctance to enter debates that speak too directly to actual policy choices.<sup>148</sup> Admittedly, a coordinated research community certainly emerged after 1985 that shared a consensus on the nature of the problem and agreed that it ought to be brought to the attention of policy makers (although the group also acknowledged a high degree of uncertainty). However, there was and remains much less consensus on the principled

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<sup>147</sup>Boehmer-Christiansen 1994a, 140, 1994b.

<sup>148</sup>Bolin 1994.

beliefs about how to think about the threat from climate change in terms of resiliency of ecosystems and the like.<sup>149</sup> If one principle did arise, it was the notion of precaution in the face of uncertainty, which came out in the statement of the second climate conference.

In terms of an ecological approach, even the most ardent supporters of the values of an “ecological scientific community” did not press hard for that approach in policy. For example, the initial approach, advocated by Canada, called for a framework agreement on a “law of the atmosphere,” like the Law of the Sea. Agreement on a framework convention could then lead to separate protocols on specific issues such as acid rain, ozone depletion, and climate change. “The rationale for this approach was that it recognized the interdependence of global atmospheric problems.”<sup>150</sup> Similarly, the 1988 Toronto Conference Statement called for “a comprehensive global convention as a framework for protocols on the protection of the atmosphere,” which fit well with a “scientific ecology” orientation. Ironically, a second approach later adopted – to focus simply on a convention on climate change – came from Tolba, whose stature was high because of his leadership role in producing an international agreement on the ozone issue. At a conference in Ottawa in 1989, Tolba strongly criticized the “law of the atmosphere” approach as politically unrealistic, and argued for a more narrowly focused convention. As a result, it never again achieved serious consideration.<sup>151</sup> So it would seem that when it came to policy, the scientists most actively engaged seemed as driven by political expediency as by drawing social laws based on the laws of nature.

The actual content of the climate change treaty, while it certainly does reflect some ecological ideas, also has embedded in it the core norm-complex of liberal environmentalism. For example the convention’s objectives include (in Article 2) stabilization of greenhouse gas concentrations “at a level that would prevent dangerous [not defined] anthropogenic interference with the climate system... achieved within a time frame sufficient to allow ecosystems to adapt naturally.” However, it goes on to say that the level decided upon should also “enable economic

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<sup>149</sup>Jim Bruce, author’s interview.

<sup>150</sup>Bodansky 1994, 53.

<sup>151</sup>Bodansky 1994, 53.

development to proceed in a sustainable manner.”<sup>152</sup> The principles and commitments reflect this balancing act, reproducing the same or similar wording to principles found in the Rio Declaration. Scientists certainly did not have consensus on this set of norms, nor did they clearly articulate a set of values that flowed from scientific research that would frame the convention differently.

In addition, virtually no discussion occurred prior to the Toronto meeting about North-South issues. The scientists who dominated atmospheric research primarily came from the North and discussions about the effects of climate change on development for the most part were not addressed by this group. The only notable exception came out of a second Villach conference in 1987 where delegates recognized that aid might be necessary to pay for anticipatory adaption to climate change in developing countries.<sup>153</sup> Scientists simply did not deal with these issues, which they perceived as political.

Even after the treaty was signed in 1992, entrenching ideas inherent in the concept of sustainable development, scientists did not much discuss the concept, but simply accepted it as part of their mandate. The understanding of sustainable development within working group III of the second assessment report was a basic notion that severe environmental or economic damage would make development unsustainable. As Bruce put it, “If [the population is] going to be flooded, then that makes it difficult to sustain development for a small island state... or if [the state is] going to have economic losses of nine per cent GDP per year.”<sup>154</sup> He added that the ecological perspective did not dominate thinking about sustainable development among scientists. In addition, the issues around sustainable development, in the eyes of scientists, were often viewed as political questions not fit for recommendations by the IPCC. For example, equity issues were largely left unexplored in the first IPCC report and the second report took a cautious approach, emphasizing that politicians should choose between such policies although the effects could often be determined scientifically.

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<sup>152</sup>WMO/UNEP 1992.

<sup>153</sup>Rowlands 1995a, 189.

<sup>154</sup>Jim Bruce, author’s interview.



It should also be recognized that the IPCC itself simply had little direct effect on the content of the FCCC signed at Rio. A commentary on the 1990 IPCC assessment report by authors affiliated with IIASA put it as follows:

The first report [on the science of climate change] is easily the single most referenced document on the science of climate change, demonstrating its focal role in the public debate. IPCC “consensus” documents are paraded by both environmental non-governmental organizations (ENGOS) and governments in their domestic debates to “show” that the climate problem is real and deserves policy action -- and by others to demonstrate the reverse -- even though the IPCC documents are appropriately more cautious.... .. [However], in practice, it has been extremely difficult to integrate research on the effects of climate change and policy options into coherent and useful consensus documents.<sup>155</sup>

They go on to note that a reorganization for the second assessment report explicitly included more economics and expertise drawn from developing countries, two developments driven much more by governments than the scientific community or the science of climate change.<sup>156</sup>

Rowlands is more blunt, stating that the 1990 IPCC report was marginalized in the intergovernmental negotiating process and that “politicians regarded any consensual scientific knowledge as but one of many inputs.”<sup>157</sup>

The second assessment report (1995) responded to these concerns on the policy side, but its presentation of options (its mandate) does not demonstrate a consensus. Furthermore, the themes that do emerge draw much more on economics than they do on a vision typical of ecological science. This result is not surprising, given that social scientists who dominated working group III were primarily economists. Most of the economists approved by governments, although certainly prominent, were classical and/or environmental economists, not ecological economists. In fact, hard scientists and economists often disagreed on policy instruments and approaches (and there were debates on technical issues among economists as well).<sup>158</sup>

Nonetheless, the overall approach reflects the mandate given to the IPCC (and taken from the

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<sup>155</sup>Victor and Salt 1994, 27.

<sup>156</sup>Victor and Salt 1995.

<sup>157</sup>Rowlands 1995a, 89.

<sup>158</sup>Jim Bruce, author’s interview.

convention) to “place the socioeconomic perspectives in the context of sustainable development,” which reflects liberal environmentalism.

Three conclusions on the climate change case raise difficulties for the epistemic communities approach to understanding international environmental governance. Recall, climate change should be an easy case, which suggests the challenges to the hypothesis ought to be taken seriously.

First, scientists could not or would not formulate a coherent set of policy ideas that states then adopted. Admittedly, a transnational scientific community did prompt an international policy response independently and ahead of public concern with the climate change issue. In that way, the epistemic community hypothesis finds some support in the climate change case. However, scientists did not have a big influence on policy formation. The height of influence probably came in 1988 when the Toronto conference recommended a 20 per cent cut from 1990 levels in CO<sub>2</sub> emissions by the year 2005. Although this concrete recommendation has repeatedly been raised by environmental NGOs and states likely to be most affected by climate change (small island states, for example), it has not received serious consideration as a focal point for agreement. In addition, the ecological approach did not dominate proposals. Governing norms that stemmed from the scientific community, apart from the Precautionary Principle, either did not appear in the agreement reached or did so in the context of other norms that supported liberal environmentalism. The one policy implication, apart from reducing emissions, that seemed to produce consensus in the scientific and technical communities involved in climate change research was the need for policy to focus on alternative energy technologies and policies. But that concern too gradually eroded as a focus for policy, even within the IPCC, which concentrated more on the economic efficiency of policy options.

Second, when scientists did gain public/political attention, they did so through encouraging concern on the issue itself, not its framing. In any case, governments quickly responded to such concern by taking control of transnational research and policy making. Governments also took allocative decisions out of the hands of scientists, who proffered few unified recommendations anyway on such issues. Far greater consensus could be found among economists who seem to be becoming increasingly important providers of policy advice.

Third, the linkage of scientific activity and ideas to sustainable development came late, and was largely pulled by individuals with existing links to the development community, such as UNEP head Mustafa Tolba. These links did not spring from science or the climate change research community. In Tolba's case, the concerns stemmed from his official position and his own convictions. In numerous published speeches he stressed the importance that should be placed on the effects of climate change, among other environmental problems, on the developing world. His speeches also emphasized the need to formulate problems in a way to address such concerns. In contrast, most of the relevant scientific community demonstrated either indifference to sustainable development as framed by UNEP or unease with UNEP playing a leading role.<sup>159</sup> The conclusions on climate change are indicative of the overall performance of the epistemic communities hypothesis in explaining the evolution of international environmental governance.

### Conclusions

This chapter has questioned the proposition that science is a primary informer of policy direction on international environmental concerns. Thus it challenges a key conclusion of Peter Haas's, "that science is essential for the understanding of global environmental problems, thus shifting the determination of the scope of allocative decisions to the international institutions for science."<sup>160</sup> To the contrary, scientists were largely excluded from allocative decision-making and often eschewed such roles. When they did have influence, such as in promoting the Precautionary Principle, it did not come as a direct outcome of their specialized knowledge of cause-effect relationships.

Second, consensus on cause-effect relationships within scientific communities did not seem to correlate well with action on major issues, although sometimes individuals or groups of scientists played an active role in promoting particular environmental concerns. On the central question of principled beliefs, consensus often seemed particularly weak on a number of dimensions, making the case difficult to sustain that such consensus was either necessary or sufficient for development of particular norms of environmental governance. Even on specific

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<sup>159</sup>Gordon McBean, author's interview.

<sup>160</sup>Haas 1996, 1.

matters of policy choice, consensus was relatively uncommon. Thus the consensual knowledge which supposedly gave a potential epistemic community its political power is open to question.

Third, problems arise from the literature's emphasis on tracing the effects of single communities, based on the assumption that a particular group should be privileged because of its claim to authoritative knowledge in the particular issue area. This approach can easily miss the competition of expert groups who come at policies with different agendas. Environmental policy since 1972 has not been the sole concern of a community of scientific ecologists. As the development of norms in practice suggests, development and environmental economists also had an interest in environmental policy and actively sought, or were solicited, to influence the shape international environmental governance would take (a point taken up in the next chapter).

A related problem is the focus in the literature on an ideal-type scientific ecology epistemic community. This focus has led Haas to the erroneous conclusion that environmental governance now faces a backlash from rules and principles of trade regimes and market challenges at the domestic level.<sup>161</sup> This bias is built into epistemic community studies since they start with the ideas of a particular community and assume a backlash when those ideas do not dominate. The bias closes off a critical examination of how such ideas interacted with other forces or whether they are indeed the basis for the norms and institutional arrangements that finally result. Hence the focus on "scientific ecology" simply misses the compromise of liberal economic and environmental norms that was at the very centre of bringing environmental norms into mainstream international governance. Although arguably the compromise embodies important contradictions, it has shaped the way environmental concerns are now institutionalized in international governance and arguably it has been the single most significant factor in shaping international environmental governance over the last 25 years. The so-called backlash does not exist; it is instead a logical outgrowth of the norm-complex developed over the last 25 years.

A second set of conclusions concerns how science actually did work. The primary pattern revealed is that, contrary to the epistemic community hypothesis, scientists were reactive, not proactive in the major norm-articulating events identified, even learning themselves from their involvement in such activities.

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<sup>161</sup>Haas 1996, 43-44.

The science policy literature often focuses on reasons for a lack of independent influence, including mutual distrust of scientists and policy makers/publics or simply a reluctance of scientists to enter into the policy process, even among those most active in communicating scientific ideas to policy makers.<sup>162</sup> Similarly, Lemons and Brown note the “fallacy of unfinished business” -- the tendency for scientists to see problems as technical, therefore requiring only technical solutions. That view closes off for them social, ethical, or political solutions.<sup>163</sup> Poor interdisciplinary communication may also limit the production of policy-relevant knowledge.<sup>164</sup> Such problems may also stem from the difficulties of effective communication between scientists and policy makers and the public, which leads to misunderstandings especially in the face of incomplete knowledge and scientific uncertainty.<sup>165</sup> Often policy makers can then choose among competing knowledge claims within scientific communities.<sup>166</sup>

It should not be surprising, then, that scientists involved in international environmental policy exhibited the same kind of unease as their colleagues in other policy-relevant fields when they got too close to political processes. This situation remains largely unchanged since 1972. At that time, Lynton Caldwell noted that SCOPE “appears to accept an assumption widely shared among scientists who believe that their public mission is largely fulfilled when scientific studies are made available to governments and international organizations.”<sup>167</sup>

William Clark similarly looked back on the Brundtland Commission process and argued the small role science played was for the best:

I think it’s probably just as well.... The agenda on sustainable development moved ahead very rapidly in the Brundtland era into UNCED in ways that were largely successful in shaping a political re-framing of the terms of the debate, a political consensus on at least some directions we needed to be heading.... Frankly, they had about enough science to let that go forward and not so much that it got in the

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<sup>162</sup>For example, Bolin 1994. Also Sherwood Rowland, in Brodeur 1986, 80-81, lists a number of reasons why scientists are not more active.

<sup>163</sup>Lemons and Brown 1995, 13.

<sup>164</sup>For example, ICSU and SCOPE generally failed to incorporate views of social scientists.

<sup>165</sup>Rowland 1993.

<sup>166</sup>Susskind 1994, 62-81, summarizes a number of these problems.

<sup>167</sup>Caldwell 1990, 115.

way. [Now it is time] for the science community to make a re-examination of the sustainability issue and see whether, given the political consensus that has shaped up... we're doing the right science... whether the necessary long-term science and monitoring legs for this venture fit... the development, the political, and economic legs. So I think [the science and politics of sustainable development] were out of phase, but whether that was done intentionally or not, [it was] probably done very effectively and would have been less effective had the scientists been running all over the Brundtland commission.<sup>168</sup>

Such a conclusion suggests the causal arrow runs opposite to the way the epistemic communities hypothesis suggests. Even when groups of scientists attempted to maintain their independence, governments proved particularly adept at reining in science and setting parameters for their research and influence on policy.

Finally, a number of empirical anomalies suggest that the evidence simply does not hold up in defense of a narrow focus on science in explaining the evolution of environmental governance. Most obviously, there is a lack of fit between ideas generated by an epistemic community of natural scientists and observed normative shifts. The disinterest with which most scientists greeted the political/economic questions that seemed to guide much of norm creation suggests a key condition for such an epistemic community's influence has not been met.

One broader normative concern about the epistemic community literature deserves mention before closing off this discussion -- that the literature makes an assumption that if consensual knowledge exists on environmental management in an epistemic community, then institutions ought simply to be designed to better integrate such knowledge. That position ignores the possibility that contestation might come from outside that community, or that the community is not equipped to deal with the broader social and political implications to which that knowledge might be put to use. Conversely, that position might blind analysts into assuming that the epistemic community is being listened to when the problem it identifies is being addressed. Such an assumption makes it easy to ignore the real contestation over how the problem is being addressed, to what ends, and for whose benefit. Thus, epistemic community analysis either misses the boat on how ideas inform governance, or leads to an uncritically examined normative end point where the community's prescriptions are assumed to be in the best interest of humankind.

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<sup>168</sup>William Clark, author's interview.

## **Chapter Four**

### **Economic Ideas and International Environmental Governance: A Socio-Evolutionary Approach**

This chapter makes two basic theoretical points. First, it argues that ideas that become institutionalized as governing norms must find a certain “fitness” with the existing international social structure. This is true because most issue areas that constitute coordination or collaboration problems for states generally exist within a nested set of governing norms that have legitimacy. Second, this chapter argues that new norms may come from a variety of sources, but that these sources must have a basis of legitimacy themselves in the eyes of key actors who participate in, and are affected by, the governing structures they create. The key to understanding the evolution of international governance, then, is to try to gain an understanding of the interaction of new ideas with the social structures -- nested sets of norms -- that they encounter.

Empirically, this chapter argues that economic ideas overshadowed scientific ideas and ecological thought in producing normative compromises at key junctures over the last 25 years of international environmental governance. Given the two theoretical points just made, that influence was not accidental. Policy entrepreneurs were most successful at moving a concern for the environment into the mainstream of international governance when they tried to nest environmental norms into the broader international social structure, even as that structure evolved to reflect the now dominant liberal economic order. The result was the compromise of liberal environmentalism. Actors and the ideas themselves certainly mattered. However, the success or failure of new ideas in response to environmental problems must be understood in the context of their interaction with the international social structure they encountered and attempted to modify.

This chapter also demonstrates the influence of economic ideas, but not simply as embodied through an “epistemic community” of economists and like-minded policy makers. The last chapter showed that it would be odd to talk about economists as an epistemic community in the context of global environmental governance because that would undermine the explanatory power of the hypothesis, which relies on the privileged position of one particular group of knowledge-based experts to explain outcomes. Even if one were to try to incorporate two or

more expert groups into the hypothesis, the empirical story of the role of economists does not fit an epistemic communities explanation: an identifiable transnational group of economists did not emerge to put forward or promote the sustainable development concept or the ideas behind liberal environmentalism. The ideas around liberal environmentalism certainly had roots in economic thought that dated back at least 30 years. However, much of the work by economists occurred independently of each other in their home countries and they were not involved in transnational research programs, at least not until the move toward liberal environmentalism was well underway. When ideas did flow transnationally, they did so through governmental institutions that, while dominated by the economics profession, could not really be considered an independent community of experts who had regularized contact, built consensus around an issue, and then promoted that issue independently based on a set of values. If anything, the advent of liberal environmentalism empowered economists in environmental policy making, but could not be said to have arisen through their efforts. Understanding what happened in the mid-1980s to move international norms toward liberal environmentalism thus requires looking far beyond the expert communities that studied such ideas.

An alternative explanation is thus put forward that shows how the ideas associated with liberal environmentalism interacted with an existing international social structure of governance to institutionalize the norm-complex described in chapter two. I call this a socio-evolutionary approach to understanding the process of normative development. Below I outline that approach. Then I apply the approach by tracing through the economic ideas that evolved into “sustainable development” thinking and eventually became institutionalized as liberal environmentalism. Thus, descriptively, the chapter shows the importance of economic ideas as the ideational basis for liberal environmentalism. In terms of explanation, the socio-evolutionary approach shows why those ideas dominated over other alternatives. It also leads to a better understanding of why international environmental governance evolved as it did since 1972, than does an epistemic communities approach. I have already presented much of the empirical detail for this explanation in chapter two. To avoid repetition, below I only elaborate on key events in the evolution of environmental norms and refer back to earlier empirical details as appropriate.



## **A Socio-Evolutionary Approach**

Building theory to map the interactions of ideas and the structures they encounter (however defined) has proven elusive. Whereas a number of scholars now recognize the utility of examining the role of ideas to explain the content of international regimes or governance structures, they have expressed frustration with the literature on two counts: it either does not adequately explain why ideas possess a causal power of their own or, if it does, then it fails to explain why some ideas are selected over others.<sup>1</sup> Solutions inevitably address how ideas interact with their environment, usually conceived of as institutions (whether understood by rationalist or historical institutionalist models). What bedevils theories of ideas and especially of how ideas become institutionalized as norms (which are collective understandings of appropriate behaviour) is how to reconcile the interaction of the sources of ideas with structural explanations, where ideas are residuals of powerful actors pursuing their interests.

In one of the few examples of an attempt to map this interaction, Garrett and Weingast make the rationalist argument that ideas create “focal points” around which behaviours of actors converge.<sup>2</sup> They identify the environment in which such ideas must operate as essentially a constellation of actors with given interests. Ideas simply select from one of the multiple cooperative equilibria available to create stable institutions. However, this formulation is unsatisfactory from the perspective of trying to explain the actual content of governance in that any number of ideas would seem to do.

What is required, then, is to move beyond a rationalist approach that views ideas as intervening variables between exogenous interests and behaviour. The constructivist literature in international relations presents one alternative. It recognizes that interests themselves are derived, at least in part, from an existing normative or social structure in which actors participate.<sup>3</sup> Constructivism focuses especially on how actors’ interests derive from their “identities” (as sovereign states, for example). In so doing, it emphasizes the constitutive dimension of norms, wherein norms do not merely regulate behaviour, but define social identities

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<sup>1</sup>Yee 1996; Blyth 1997; and Woods 1995.

<sup>2</sup>Garrett and Weingast 1993, 176.

<sup>3</sup>Dessler 1988; Wendt, 1992, 1994; Wendt and Duvall 1989; Kratochwil 1989; and Busumtwi-Sam and Bernstein 1997.

and practices. Such practices are prior to individual action in that they define the range of meaningful if not conceivable behaviour. However, constructivist writing to date has generally lacked a clear theory of how new ideas interact with the existing social structure. Such a theory would identify the process through which ideas become institutionalized as norms -- in other words, how norms and social structure evolve.

A few international relations scholars, influenced by the “new institutionalism” in comparative politics<sup>4</sup>, have begun to address this interaction between ideas and social or institutional structures. For example, Steve Weber has argued that the creation and function of the European Bank for Reconstruction and Development can be better understood in reference to its “institutional” environment rather than its “technical” environment. The Bank, he argues, developed from a shared set of ideas and purposes of states in Western Europe (around the state, democracy, and market economics) and pushed “the ideas and consensus around them substantially further as part of an effort to extend east an ideational and institutional foundation for multilateral cooperation.”<sup>5</sup> He draws on organizational theory and the new institutionalism to suggest that the norms and functions of the bank were less dictated by efficiency and means-end rationality (the technical environment) and more by their “social fitness” with existing institutions and political economic norms existing in Europe:

Organizations in an institutional environment are judged by the appropriateness of their form; they compete for social fitness... and they are rewarded for establishing legitimate authority structures and procedures more than for the quantity and quality of what they produce. Ends and means are not treated separately, so that proper procedures and a “rationale” -- an account that makes what the organization does understandable and acceptable within its social context -- are the basis of legitimacy.<sup>6</sup>

Similarly, Jeff Checkel makes the case that changes in Soviet foreign policy under Gorbachev were made possible by a confluence of factors that included a reformist general secretary, a group of entrepreneurial purveyors of new concepts and ideologies, and “institutional and political settings that at different times either constrained or enhanced [entrepreneurs’] ability to influence

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<sup>4</sup>Pioneering works in the new institutionalism include March and Olsen 1984, 1989.

<sup>5</sup>Weber 1994, 2.

<sup>6</sup>Weber 1994, 7.

policy.”<sup>7</sup> What these two studies have in common is that neither explains outcomes as merely dependent on the introduction of new ideas interacting with a set of existing interests in a rational manner. Rather, the normative context – or social fitness – of new ideas plays a key role.

Here I take the basic insights from studies such as these and from constructivism, to push the idea of “social fitness” further. What is required, I argue, is a clearer specification of social structure and a method to think about how ideas interact with that social structure – in other words, the selection process – to see the means through which some ideas get institutionalized as norms while others do not.

In contrast to the rationalist approach to ideas, I propose a socio-evolutionary approach that focuses on how ideas interact with existing norms themselves, which are based in intersubjective understandings among actors. The approach is “evolutionary” because it identifies a selection process based on the interaction of ideas with their environment that has some parallels to processes of natural selection.<sup>8</sup> Ann Florini has thus described the acceptance of new norms as follows:

Given two contested norms, one may be more prominent in the norm pool, more compatible with other prevailing norms, and/or better suited to the existing environmental conditions than the other. If so, that one will become more frequent in the population relative to the other.<sup>9</sup>

This analogy should not be carried too far, however, since unlike natural selection, the evolution of norms is a conscious activity that, while manifested in practices, exists in the minds of actors who engage in those practices. It does not simply result from survival or success of some traits over others that occurs independently of actors’ understanding of them. Hence the key to such a model is both the legitimacy of new norms (and the ideas from which they come) and the fitness with the social structural environment they encounter. Hence the “socio” part of the approach here is the recognition that norms interact with a “social” structure of existing institutionalized

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<sup>7</sup>Checkel 1993, 273.

<sup>8</sup>Florini 1996. She draws a direct analogy between norms and genes, and organisms and states, to build a theory of normative selection with direct parallels to natural selection.

<sup>9</sup>Florini 1996, 369.

norms that have already become legitimated and set the conditions for behaviour within that social structure.<sup>10</sup>

Rather than relying on direct parallels to evolutionary theory, as Florini does, I focus on processes of legitimation. This avoids dependence on random variation or mutation as the source of change in my theory.<sup>11</sup> Human beings engage in purposeful action and self-reflexive thought. To quote Anthony Giddens “every social actor knows a great deal about the conditions of reproduction of the society of which he or she is a member... institutions do not just work ‘behind the backs’ of the social actors who produce and reproduce them.”<sup>12</sup> So while I borrow the concept of fitness and modify it to mean *social* fitness, new ideas in the minds of actors and the legitimacy they can gain for such ideas are the drivers of change. They are not random, but purposeful attempts by actors (be they individuals or social groupings) to alter behaviours. Social structure constrains and enables the entrance of such new ideas. However, social structure is not completely determining. Rather, the legitimacy new ideas can gain before becoming institutionalized is also an important factor of success. So the mechanism of change has no direct parallel in evolutionary theory. Indeed, the modifier “socio” is meant not only to emphasize the focus on social structure, but that human, that is, reasoned action is the source of change which occurs only in its interaction with webs of intersubjective meanings.

A complete discussion of international social structure is beyond the scope of this chapter. However, some basic contours of social structure can be described in order to identify

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<sup>10</sup>Such a view of social structure is well supported within the constructivist literature. Wendt 1992, 1994; Wendt and Duvall 1989; Dessler 1989; Kratochwil 1989; and Busumtwi-Sam and Bernstein 1997, among others. My emphasis on international social structure also differentiates my approach from Emanuel Adler’s theory of “cognitive evolution” (1991). Adler focuses primarily on innovation and learning within states, and only secondarily on the subsequent diffusion and selection of new interpretations of the social world domestically and internationally. Among other differences, my approach focuses more directly on the interaction of ideas (whatever their source) and social structure.

<sup>11</sup>To be fair, Florini also emphasizes legitimacy, but she discusses it as indicative of norm “prominence,” one of the factors that influences whether a norm will be accepted (1996, 374-375). She uses “prominence” – a direct analogy to gene prominence as a factor that accounts for reproductive success in evolutionary theory – to encompass a number of other factors that affect the promotion of a norm. Thus the analogy, although creative, is too forced to focus attention directly on social processes.

<sup>12</sup>Giddens 1979, 5.

general patterns of norms in the international system.<sup>13</sup> Social structure refers to the institutional manifestation of ideas and values, expressed in norms and rules. To constitute structure, ideas and knowledge must be institutionalized. Institutionalization involves the nesting of norms, that is, when they become linked with other norms that express similar values, interests or goals, to create an ordered norm-complex. Social structure in turn evolves in response to new norms while it also reproduces practices (of states and other key actors) that new norms attempt to alter. A social structure is also a structure of governance in that it is a source of authority. Political authority is exercised within a social structure that legitimates it. In other words, political authority rests on the institutionalized norms that constitute social structure and thus define which political institutions and practices are viewed as appropriate.

In very general terms, international social structure can be thought of as consisting of three basic levels. At the deepest level are the *fundamental norms of identity*, which identify who or what the primary actors are. In the contemporary period, constitutive norms have institutionalized sovereignty as the organizing principle of the international system and identified states as the sole repositories of sovereign authority. At level two are *the rules of obligation*, which specify the minimum conditions for the coexistence of sovereign states. These norms specify the sovereign equality of states, rules of non-intervention and non-aggression, property rights of states and jurisdiction, and diplomatic immunities. Finally, at level three are the *rules of process*, where most of the norms of concern in environmental governance can be found. These norms and rules constitute and regulate areas of international interaction and cooperation beyond the minimum conditions for coexistence, such as those concerning international trade and commerce or environmental management. The actual content of any specific level is an empirical and historical question, although the three-tiered structure is relatively constant.<sup>14</sup>

While new ideas about environmental governance most obviously must find a fitness with other norms at level three, the rules of process, the general formulation of social structure above

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<sup>13</sup>For a detailed discussion see Busumtwi-Sam and Bernstein 1997. The discussion of social structure below draws from this paper.

<sup>14</sup>A large body of literature has identified various levels of social structure. For example, Frank 1988, 751-59; Kratochwil and Ruggie 1986; Wendt and Duvall 1989; Kocs 1994; and Busumtwi-Sam and Bernstein 1997. However, the formulation of a three-tiered structure is an innovation of the latter source, although others hint at the differentiation of types of norms in a similar fashion.

is important here to the degree that level three norms must also be compatible with norms at levels one and two if social fitness is to be easily achieved. Social structure in turn evolves in response to new norms while it also reproduces practices (of states and other key actors) that new norms attempt to alter. Seen in this light, the evolution of environmental norms demonstrated in earlier chapters can be seen in the context of their fitness or competition with norms at various levels of social structure. The important point here is simply that new norms are likely to face much greater contestation if they are incompatible with deeper norms, such as those that specify the identity of actors themselves.

Hence, it is not surprising that UNCED reproduced norms consistent with the practices of sovereign statehood and control. Similarly, the dashed hopes of some of the more activist scientists or environmentalists for a more holistic approach at Stockholm resulted from the threat it posed to the identity or status of some states. As I will show below, various ideas about environmental governance pose challenges to sovereign state control, but attempts to institutionalize such changes have generally failed. Levels one and two of social structure tend to enable only a limited range of responses to global environmental problems. I am not the first to note this pattern. For example, Karen Litfin and Ken Conca, among others, have pointed out that most of the institution-building in response to global environmental concerns has occurred within the confines of traditional sovereign-state diplomacy.<sup>15</sup>

Ideas that challenge these norms have generally failed to become institutionalized. For example, this chapter discusses the failure of ecodevelopment. Although it failed in large part because of its incompatibility with economic norms at level three, it also posed a challenge to norms at levels one and two. Thus, part of the reason for its failure is that ecodevelopment, and related strands of “green” thought, stress local control of economic activity and decision-making that could diminish the administrative control of the state.

Ideas and norms that challenge state sovereignty from above have also faced strong contestation. For example, chapter two noted that global management schemes such as those supported by the Common Heritage of Mankind norm have fallen out of favour. Other challenges from above might come in the form of granting more authority to transnational institutions for science or of support for a more general social movement to increase

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<sup>15</sup>Litfin 1993; and Conca 1993.

democratization and common culture at the global level. Indeed, many strands of environmental thought have long-supported the creation of a more cosmopolitan world order that limits the role of sovereign nation-states, possibly “pushing the nation-state system... somewhat from the centre of world political order.”<sup>16</sup> The early impetuses behind global environmentalism, as articulated in even mainstream publications such as Only One World, were to push in the direction of a greater sense of planetary citizenry and global stewardship.<sup>17</sup> However, as I showed in chapters two and three, actual responses instead have been consistent with sovereign control and in opposition to global management (except by sovereign states) or the relinquishing of control to international institutions for science. The continued entrenchment of sovereign control is in spite of the observations by many scholars and environmentalists that the state is not the appropriate site for, or source of, effective management of environmental problems.

This social structural reality of international politics has meant that most (though not all) of the contestation around global environmental governance occurs at the level of rules of process. Fitness with existing institutional forms is also important at this level and that is where most of the analysis in this chapter occurs. For example, when proposed environmental norms conflict with trade norms (or even other institutionalized environmental arrangements) some contestation is likely to result. This does not mean current norms and institutions always get reproduced; indeed, norms constantly face contestation. Rather, when new problems arise, norms that form in response must not only result from “good ideas”, but must have the ability to make headway in existing social structures.

Following from the above discussion, I argue that three factors influence the success of new ideas and the norms they support: the perceived legitimacy of the source of new norms and ideas, the fitness with existing international social structures they encounter, and the degree to which key actors identify their social interests with those ideas. The latter usually depends on some degree of congruence in domestic political and socio-economic organization among relevant states. Such congruence is important because international social structure in the

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<sup>16</sup>Deudney 1993, 301. Deudney does not argue that such a shift is occurring; rather, he sees in “green culture” some “of the major ingredients lacking in previous cosmopolitan alternatives to nationalism.”

<sup>17</sup>Ward and Dubos 1972.

modern state system, at least at the level of process, generally reflects contests between competing conceptions of states' social purposes.

The latter observation means that power plays a role in this approach, although not as traditionally measured by realists in terms of material capabilities alone. Rather power is exercised in the context of an existing normative structure that reflects practices of powerful actors that are constrained and enabled by that structure. In other words, power matters, but norms contextualize power relationships; they are the media through which actors decide on the appropriateness of practices and engage in contests over those practices. In this vein, John Ruggie argues that one must examine how power (capability) and social purposes become fused to project political authority, thus contributing to the formation and maintenance of international governance structures.<sup>18</sup> In a normative structure that privileges sovereign states, the introduction of new ideas still depends in part on congruence with their social purposes.

Following this pattern, economic ideas that became influential largely did so within key institutions that, owing to their legitimacy, disseminated those ideas to member governments and other international institutions. In this, the OECD played the most significant role in generating economic ideas that brought environmental concerns into the mainstream of international governance. The OECD also identified the compromise -- the fit with international social structure -- that would eventually be agreed upon at UNCED. Without these ideas and their nesting within key institutions, environmental governance was unlikely to have developed as it did and agreement on norms would have been more difficult and less coherent. Legitimacy of ideas mattered, but not simply in the way an epistemic communities hypothesis would suggest. For example, it is doubtful that UNEP on its own could have succeeded in ushering in a set of ideas that had as great an influence on international governance as did ideas from the OECD. Instead, legitimacy came both from the purveyors of ideas themselves and the institutional settings in which those ideas first made headway.

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<sup>18</sup>Ruggie 1983.



### **Limited Success: Economic Ideas, the North-South Divide and Ecodevelopment**

Tracing through various attempts to bring environmentalism into the mainstream of the international agenda demonstrates the repeated influence of economic ideas. However, such ideas did not fully succeed until the advent of sustainable development. When they did, entrepreneurial leaders such as Maurice Strong, Mustafa Tolba, Jim MacNeill, and Gro Harlem Brundtland (among others) were necessary to pull those ideas together in legitimating institutions. When they did not fit with dominant social structures or make headway within legitimating institutions, those ideas failed to become institutionalized.

Before beginning the historical trace of the influence of economic ideas, it is worth noting that many ideas associated with liberal environmentalism received some policy attention as far back as the late 1960s. Their roots go back even further to Pigou's 1920 book The Economics of Welfare, which suggested that governments should introduce corrective taxes and subsidies to discourage activities that generate externalities.<sup>19</sup> The basic elements of Pigovian analysis became the foundation for the new field of environmental economics that focused on ways to internalize the ostensibly external costs of environmental degradation. By the early 1970s, a number of government and academic studies that contained specific suggestions on how to cost the environment had appeared in Canada, the United Kingdom, and the United States.<sup>20</sup> The ideas promoted in those studies ranged from the development of economic incentives to the creation of private property in pollution rights. The academic literature credits University of Toronto economist John Harkness Dales's book Pollution, Property and Prices with introducing the latter idea -- that transferable property rights could work to promote environmental protection at lower aggregate cost than conventional standards.<sup>21</sup> Hahn and Stavins note that, "From these two seminal ideas -- corrective taxes and transferable property rights -- a substantial body of research has developed."<sup>22</sup>

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<sup>19</sup>Pigou 1920, 23-30. See also Weale 1992; and Hahn and Stavins 1992.

<sup>20</sup>For a brief list of prominent studies see Thompson 1972. Notably, one such study cited was commissioned by the Canadian Government from Jim MacNeill (1971), who later became secretary-general of the Brundtland Commission.

<sup>21</sup>Dales 1968. See also Thompson; and Hahn and Stavins who refer to Dales.

<sup>22</sup>Hahn and Stavins 1992, 464.

However, other lines of thought about how to bring economic activity more in line with environmental control had also appeared during this period. The policy literature in the lead-up to Stockholm contains a number of alternatives that draw on different traditions in economic thinking. For example, some policy proposals advocated an extreme version of command and control, which suited a position on environmental problems taken by eco-pessimists. Proponents of this view saw environmentalism as eschewing the left/right, or East/West ideological divide by pointing out that environmentalists in the West could see the day when private property as it then existed would no longer be possible when it came to natural resources. For example, one writer in 1972 noted that "...in the United States, for example, one may read articles affirming that one may one day come to the point where all natural resources will have to be state-controlled, if not declared the property of the community altogether." Common property ownership and community rights to enforce standards applied to that property were as seriously considered as private ownership schemes.<sup>23</sup>

More recently, Eric Helleiner has identified a distinguishable "green" perspective on International Political Economy (IPE).<sup>24</sup> This perspective, Helleiner argues, differs in its normative goals and theoretical assumptions from the traditional realist, liberal, and Marxist variants of IPE. In essence, the "green" perspective holds that the world political economy ought to resemble -- in Helleiner's terms -- a neo-medieval structure, where self-regulating local communities run their own economies, regulated by de-centralised institutional arrangements. Under such arrangements, a global civil society would control the worst global environmental problems. The intellectual lineage of such ideas dates back at least to Adam Smith's descriptions of a decentralized, de-industrial world, and to economic and social thinkers such as Leopold Kohr, E.F. Schumacher (who was heavily influenced by Kohr) and Ivan Illich. According to Helleiner, many contemporary ecological and development economists have noted their intellectual debt to Kohr in particular and to ideas that flowed from his work.

From these observations it should be clear that the story of which economic ideas were selected and how they influenced the evolution of international environmental norms is not

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<sup>23</sup>Caponera 1972. The quotation is on p. 139.

<sup>24</sup>Helleiner 1996.

simply a matter of which ideas are “better” or which merely existed within a particular community of economists. The reasons why, after 30 years, ideas associated with liberal environmentalism gained a strong foothold must be analyzed historically to see the social and political processes through which that selection occurred. Clearly, the perspective of this dissertation is that economic ideas mattered. This chapter shows which ones mattered and seeks to understand why.

Beginning with Stockholm, recall that it was development and environment economists, not natural scientists, who first introduced the environment/development linkage that Strong recognized as a requirement to get many developing countries to participate. These ideas responded to developing states’ fears about an emphasis on lifeboat ethics or no-growth philosophy implied in studies such as Limits to Growth.<sup>25</sup> In particular, developing countries worried that trade barriers would be erected under the guise of environmental protection.

As mentioned in earlier chapters, Strong convened two key meetings in 1971 of small groups of “experts” to respond to these concerns. It was the second meeting, primarily of developing country economists in New York, that he called “the single most influential meeting in terms of my development of the agenda” (the first meeting at MIT was described in chapter three).<sup>26</sup> According to Strong, the New York meeting specifically aimed to bring development onto the Stockholm agenda. As former head of the Canadian International Development Agency, he had already decided that environment and development needed to be linked, but asked Barbara Ward to convene a group of “developing country economists and thinkers to really address these issues.” As he put it, “it didn’t take a genius to figure out that through the development process that we affect the environment, and only through improved management of the development process that we can actually address realistically environmental issues.” The New York meeting of economists started the process of giving that environment/development linkage intellectual content and legitimacy, especially in the developing world:

I was world champion right from the beginning of the whole need to integrate environment and development. That was my whole thesis for coming into it, my first speech to the preparatory committee made that clear. Now, mind you, that

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<sup>25</sup>For example, de Almeida 1972; and Founex Report 1972, 12-13, 27.

<sup>26</sup>Maurice Strong, author’s interview. Subsequent quotations in this paragraph and the next are also from this interview. See chapter two for a list of participants.

was a simple conceptual approach. I needed to put flesh on the bones and I needed a lot more professional guidance and professional help, and I of course went out to seek that. I'm not saying that I invented that, I mean that was such a logical thing. But I did in fact re-orient the entire Stockholm agenda [from the focus on pollution only, under Swiss scientist Jean Moussard].

Thus, it was the New York meeting that really allowed Strong to formulate ideas that would get developing countries interested in Stockholm, and could be considered the beginning of the evolution of ideas toward what eventually became sustainable development thinking at the level of international discourse.

The context of developing country positions within a more general program of development goals is also important to recognize. Hence ideas that would underlie developing countries' positions also had roots in two more formal meetings in the lead up to Stockholm: the November 1971 Second Ministerial Meeting of the G-77 in Lima, Peru and the meeting of development experts in Founex, Switzerland. Founex, as mentioned, made a much more direct impact on the Stockholm preparations and, according to Strong, "it arose directly out of the [smaller] meeting... in New York," which also provided Founex's intellectual foundation. Founex's significance is worth reviewing. First, the report produced demonstrated that developing countries were concerned about environmental problems, but were deeply suspicious of how the international community would deal with such problems if treated in isolation from development. Second, the report differentiated the environmental concerns of developing countries from developed countries. Finally, it presented environmental concerns in the context of a set of international norms consistent with developing country concerns, in particular those expressed in the Strategy for the Second Development Decade. For example, it emphasized the sovereign control of developing countries over their economic development and their own resources.<sup>27</sup> In brief, Founex juxtaposed development and environment, showed scepticism for Northern concerns over global environmental problems when local environment and development problems related to poverty seemed far more important, and demonstrated a general antagonism toward a liberal economic order that appeared to unfairly disadvantage developing countries.

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<sup>27</sup>Founex Report 1972, 11, 22.

This combination of ideas meant that the economic ideas contained in Founex were unlikely to forge a global consensus. Nonetheless, Founex forcefully demonstrated the need to reconceptualize the new international environmental agenda if a truly global consensus on action were to be achieved. Many of the economic ideas contained in Founex persisted in various developing countries and cooperative fora right up until UNCED. For example, economic concerns expressed in the South Centre report of 1991 show remarkable similarities to those in Founex.<sup>28</sup> Many developing countries at UNCED, however, moved from those positions toward the consensus around norms in the Rio Declaration. Had new concepts not developed to forge politically acceptable linkages between environment and development, environmental governance might not have progressed beyond this North versus South, environment versus development stalemate.

The concept of ecodevelopment promoted at UNEP under Strong's leadership in the 1970s constituted the first real attempt to create a unifying set of ideas around environment and development. It in many ways came closest to the kind of synthesis that Haas's scientific ecologists might have desired. However, this attempted "marriage" of ecology and economy did not come from the science of ecology *per se*. Notably, as I pointed out earlier, Strong credited Ignacy Sachs, a French development economist, with giving the concept intellectual content, although ecological ideas clearly had an influence.<sup>29</sup> However, the concept did not translate into great success in shaping governing norms.<sup>30</sup>

I have already detailed the practical problems with ecodevelopment in earlier chapters. However, another problem was that the concept itself was re-defined from UNEP's attempt to fit ecodevelopment into a program that broadly promoted economic growth, into something more radical.<sup>31</sup> Robert Ridell's influential reformulation of ecodevelopment in his book of the same title -- the most commonly cited on the topic in the academic literature -- shows a much deeper

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<sup>28</sup>South Centre 1991.

<sup>29</sup>Interview, Maurice Strong. Sachs, however, is a critic of neoliberal or "scientific" economics and classifies his work as turning back toward a political economics or perhaps to a new "anthropological" economics. I. Sachs 1984:vii-ix. Also, I Sachs 1977.

<sup>30</sup>See Caldwell 1990, 202-204; and Adams 1990, 51-56 for discussions of the concept and why it failed to catch on.

<sup>31</sup>Moffatt 1996, 10.

suspicion of economic growth.<sup>32</sup> It views growth through global economic expansion and industrialization as almost inevitably perverse in that it benefits already wealthy nations and small elites in developing countries, while it perpetuates poverty, unemployment, overuse of resources, economic dependence, and a host of other social, economic and environmental problems that hurt the majority of people in developing countries. The subtitle of Riddell's book -- "Economics, Ecology and Development: An Alternative to Growth Imperative Models" -- reveals the general orientation of his thought, which, although not hostile to growth *per se*, emphasizes "progress more than growth."<sup>33</sup> Progress can be achieved, he argues, through administrative and social reform that includes population control, increased self-reliance at the individual and community levels, improved nutritional quality of food intake and various other small scale and local development initiatives to fulfil local needs, and the achievement of social and economic goals in the context of resource conservation and environmental protection.<sup>34</sup> Growth through economic expansion, large-scale capital investment, and liberalized trade is thus inimical to ecodevelopment as formulated by Riddell. This radicalization of ecodevelopment did not sell well in developing countries, leading politicians and industrialists did not support the concept, and the proposals appeared to many as idealistic and impractical.<sup>35</sup>

Strong attributes this lack of success to the more general negative reaction in developing countries to ecodevelopment's apparent ecological focus. As Strong put it:

I suppose there's still a sense in which many people regarded the word "eco" more in its ecological than in its economic sense and the word sustainable appealed more to the sort of outright development constituency. The word "eco" -- we never succeeded in getting it across as a synthesis of the two ecos. Rather it seemed to come out more on the ecological side.... I think in effect sustainable development sold better in the development side of the constituency.<sup>36</sup>

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<sup>32</sup>Riddell 1981.

<sup>33</sup>Ridell 1981, 149.

<sup>34</sup>Riddell 1981, 8-14, lists 11 "macro principles" of ecodevelopment to guide such policies: (1) establish an ideological commitment (to ecodevelopment); (2) increase social equity; (3) attain international parity; (4) alleviate poverty-hunger; (5) eradicate disease and misery; (6) reduce arms; (7) move closer to self-sufficiency; (8) clean up urban squalor; (9) balance human numbers with resources; (10) conserve resources; (11) protect the environment.

<sup>35</sup>Moffatt 1996, 11; and Adams 1990, 55-56.

<sup>36</sup>Maurice Strong, author's interview.

Neither the scientific and development communities around UNEP, nor the economists and other development experts in international development agencies, could produce the necessary North-South consensus or alliances among key state or institutional actors to create a focal point for environmental governance around ecodevelopment. Similarly, the World Conservation Strategy had only limited success in shaping overall governance structures, further demonstrating the limitations that policy-oriented scientists and environmentalists worked under when trying to sell environmental concerns as compatible with development.<sup>37</sup>

The failure of ecodevelopment is an important part of the normative story since the failure of governing norms also gives insight into why others succeeded. As Moffatt colourfully puts it:

One of the positive results stemming from the theory of ecodevelopment... was that sustainable development became considered as an alternative way of organising socio-economic development in a way which would, as far as possible, result in less harmful environmental practices. Like the parable of the sower, many seeds of these ideas fell on barren ground; some were cultivated as ideological blue or red blooms, and fortunately, one or two seeds were able to flourish... [as] in the Brundtland Report.<sup>38</sup>

The theoretical issue is why ideas associated with the Brundtland Report, and norms that followed from it, succeeded where others had failed.

### **Sustainable Development and the OECD**

The key change in framing the problem of environment and development came from the OECD. Its development of the Polluter Pays Principle (PPP) in the early 1970s created an intellectual basis on which to build future policies.<sup>39</sup> As mentioned, the spirit of the principle implies the use of market-friendly instruments such as pollution charges and tradeable permits that have been the trend in implementing the PPP in the 1980s and 1990s. Its main purpose is to support economic growth by achieving environmental protection with minimal distortion of markets. The notion of 'getting prices right' underlies the principle.

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<sup>37</sup>McCormick 1989, 162-170 details the complex compromises between various environment and development communities in the strategy's drafting.

<sup>38</sup>Moffatt 1996, 11.

<sup>39</sup>OECD 1975.

Given the growth-oriented goals of the OECD and other lead institutions of intergovernmental environmental governance (for example, the EC/EU and later the World Bank) the emphasis on growth and market-oriented environmentalism is not surprising. Hence, a focus on the normative environment within the OECD (the organization itself and members states) makes the policies outlined in chapter two more understandable. For example, Article 1 of the OECD Convention (signed 16 December 1960 in Paris) commits the organization to policies that aim “to achieve the highest sustainable economic growth... and sound economic expansion” of members and non-members and the expansion of multilateral, non-discriminatory trade.<sup>40</sup> Following these goals, its stated environmental position recognizes “that governmental interest in maintaining or promoting an acceptable human environment must now be developed in the framework of policies for economic growth.”<sup>41</sup>

Indeed, the OECD pioneered many aspects of economic thinking about the environment. These efforts came mostly from its environment committee established in 1970. There, a core sub-committee of economic experts introduced many of the ideas that the OECD council would later adopt and push in member states and at international gatherings.<sup>42</sup> For example, the sub-committee developed the “Guiding Principles Concerning International Economic Aspects of Environmental Policies,” of which the PPP is a cornerstone. These principles fit within the committee’s primary mandate to “investigate the problems of preserving or improving man’s [sic] environment with the particular reference to their economic and trade implications.” Its guiding philosophy is that only an “expanding economy can provide the resources to meet the higher expectations of man [sic] in his quest for a better quality of life.”<sup>43</sup> Complimenting this pro-growth orientation, the committee uses cost-benefit analysis as its primary method of evaluating alternative environmental proposals. Its research has concentrated on problems such as how to implement the PPP while maintaining fair competition in different jurisdictions. Current committee work continues along these lines, and, since Brundtland, especially concerns

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<sup>40</sup>OECD 1973a, 48.

<sup>41</sup>OECD 1973a, 15.

<sup>42</sup>OECD 1973b, 23.

<sup>43</sup>OECD 1973b, 7-8.



itself with the use of economic instruments.<sup>44</sup> However, these ideas did not just drop into international discourse or automatically become entrenched in environmental norms. Rather, individuals within OECD had to mobilize these ideas in order to pull the weight and legitimacy of the organization behind the dissemination of those ideas to powerful actors.

The signal event that brought these ideas into the mainstream of public policy came in 1984 when then Environment Director Jim MacNeill organized the “Environment and Economics” conference. MacNeill felt that part of the reason the decade since Stockholm produced such a poor environmental record was that it focused on “end-of-the-pipe” solutions that were a cost-burden to industry. The Environment and Economics conference meant to provide an economically rational response to such problems. In MacNeill’s view, “We laid the intellectual foundations for what later became known as sustainable development in [the] OECD between ‘80 and ‘84,” and the Economics and Environment conference articulated that foundation.<sup>45</sup> It greatly influenced member governments and business leaders, who were well represented there, in the direction of the OECD environment committee’s vision of environmental governance. The conference included high-level participants from OECD member governments, many at the ministerial level (for example, U.S. EPA Administrator William Ruckelshaus chaired one of the sessions), the European Commission, leading academics from the environmental economics community (David Pearce, for example), interested governmental and non-governmental organizations, trade unions, industry, and prominent individuals including Maurice Strong. The conference was chaired by Pieter Winsemius, minister of housing, physical planning, and the environment of the Netherlands. Recall Winsemius was later co-author, with MacNeill and Taizo Yakushiji of Japan, of a major report on this topic to the Trilateral Commission in 1991.<sup>46</sup>

Not only did the conference disseminate its views to powerful leaders in government and industry, it also constituted a learning process for OECD economists. As MacNeill put it, “[The conference] was with the active participation of the economic establishment in the OECD, and

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<sup>44</sup>OECD 1994a.

<sup>45</sup>Jim MacNeill, author’s interview.

<sup>46</sup>MacNeill, Winsemius and Yakushiji 1991.

you know the OECD is to classical economics what St. Peters is to Christianity. I mean it's the keeper of the keys. And so we had the economic establishment involved and that was essential" for a wider policy impact.<sup>47</sup>

In a sense, this process of how new ideas found a fitness within the constraints and opportunities of the normative environment of the OECD is a microcosm of the larger process of normative evolution. Thus, the socio-evolutionary approach taken here clearly has similarities to arguments made in the "new institutionalism" literature to the effect that the "ideas and intellectual outlooks of specialists are filtered through the institutional settings in which they operate. Depending upon the details of a particular organization's history and sense of mission, these settings can either hinder or promote particular ideas or outlooks."<sup>48</sup> New ideas about environmental policy put forward in the Environment and Economics conference were also shaped by the organizational goals and norms of the OECD and the economics profession that dominated its work. In addition, with the "economics establishment" within the OECD on board, legitimacy within the OECD as a whole was greatly enhanced.

The findings of the Economics and Environment conference emphasized the desirability of strengthening the role of economic instruments and the reciprocal positive linkages between environmental protection policies and economic growth. Studies presented found that expenditures on environmental protection had actually increased growth, spurred innovation, and increased jobs at the macro level, although losses might be experienced in specific industries. It also found that economic instruments were more efficient, effective in the promotion of innovation, and more appropriate for environmental policies that had shifted toward prevention. This latter finding was key, as it suggested that not just any form of environmental protection could solve the environment/economy dilemma, but policies that geared environmental protection towards compatibility with economic growth and the operation of the market would.<sup>49</sup>

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<sup>47</sup> Author's interview.

<sup>48</sup> Checkel 1993, 277-278. See also March and Olsen 1984, 739.

<sup>49</sup> OECD 1985 and Jim MacNeill, author's interview.

These findings, MacNeill said, turned conventional wisdom on its head that said the environment and economy were enemies, and that the best that could be achieved was a balance between the two. He summed up the influence of the conference this way:

We came out of that conference with [the] OECD saying for the first time... that the environment and the economy can be made mutually reinforcing. That was a breakthrough conclusion for that organization. It changed the way a lot of people began to think about the environment and the economy. And it was that conclusion... that I took with me into the Brundtland Commission in late '84 when we got started. And that formed one of the cornerstones, and a very large cornerstone, for the Brundtland Commission's report and its conclusions with respect to sustainable development.<sup>50</sup>

In this way, the conference played a major role in shifting the way governments, business, and the economic establishment at the OECD thought about environmental issues and the best ways to address them. In particular, the conference cemented the view, at least among key elites in the North, that economic growth and environmental protection could be compatible.

MacNeill's later role as secretary-general of the Brundtland Commission -- Gro Harlem Brundtland picked him based on her contact with MacNeill while she served as Norway's representative to the OECD Environment Committee -- ensured these ideas would gain further legitimacy. In addition, the Brundtland Commission could shape those ideas to find synergies with other norms then dominant in multilateral activities between North and South. Asked whether his work at OECD had a big influence on the Brundtland Commission's work, MacNeill responded: "Oh, well I know that! I mean I brought it into Brundtland and I was primarily responsible for Brundtland so sure, it had a big influence there."<sup>51</sup> He also said the ideas influenced industry through groups such as Stephan Schmidheiny's Business Council on Sustainable Development.

MacNeill did more than just carry ideas, he wrote a detailed agenda for the Commission that would be distributed to all participants. However, the original version contained two agendas -- the "standard" agenda which fit with traditional approaches to conservation and environmental protection, and the "alternative" agenda which, although it contained many other facets, fit generally with the OECD findings already listed. The other key innovation in the

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<sup>50</sup>Jim MacNeill, author's interview.

<sup>51</sup>Author's interview.

“alternative” agenda was to take a sectoral approach, looking at environmental problems in the context of the economic sector as a whole in which they occur, rather than looking at a particular environmental problem -- say natural resource issues such as deforestation or pollution issues such as acid rain -- in isolation. A sectoral approach would, for example, examine the problem of climate change in the context of the energy and transportation sectors, and tropical forests and biodiversity would be approached from their common sources in agricultural, forestry, trade and aid policies.<sup>52</sup>

In what was perhaps the most significant decision of the Commission, it decided to distribute a version of the report to those making submissions that contained only the “alternative” agenda. That agenda then formed the intellectual basis for Brundtland’s version of sustainable development.<sup>53</sup> Asked why the Commission did not settle on some other terminology, such as IIASA’s “sustainable biosphere,” MacNeill said that it represented simply an updated version of the standard environmental protection agenda. As such, it would have led to proposals not much different than the World Conservation Strategy, which he felt just tacked development on to a resource management agenda. In contrast, “If you read [Our Common Future] you’ll find that we begin with growth and the growth imperative. And we talk about the environmental consequences of that and we raise questions about the sustainability of growth.... So our point of departure is not the environment. It’s the imperatives for growth.”<sup>54</sup> This selection process by MacNeill and the Commission helped to ensure that ideas embodied in the “alternative” agenda would dominate. In other words, it ensured that economic growth would from then on be at the core of global environmental governance.

The influence of the OECD on the Brundtland Commission did work somewhat in the way the epistemic community literature would predict. However, key actors who carried ideas were policy entrepreneurs, not primary researchers. Also, success depended less on consensual

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<sup>52</sup>MacNeill 1984, 17-27.

<sup>53</sup>MacNeill 1984 and interview. Strong (author’s interview) did not see the choice between the possible agenda’s in as stark terms as MacNeill did, but rather as a continuation of the work started at Stockholm to link environment and development. He called the decision “tactical”, and said that he did not recall the commissioners having a lengthy substantive discussion. As he tells it, “Jim and Gro Brundtland consulted with a few of us [and] felt that was the way we should orient our work... and it was decided that the new agenda was the better framework.”

<sup>54</sup>Jim MacNeill, author’s interview.

knowledge and more on institutional backing where legitimacy existed for the policy areas Brundtland would address; policy makers took notice when an organization such as OECD with top economic credentials supported the environment.

The Brundtland Commission process also coincided with a period of change in the international political economy, domestic economies, and environmental policies in many countries. Internationally, remnants of NIEO discourse still existed within the United Nations system, but any serious negotiations over an NIEO had already ground to a halt by the early 1980s. In this context, the Keynesian-style compromises described in chapter two reflected somewhat the broader normative shape of North-South dialogue in the mid-1980s. However, by 1987 when the Commission released the report, those norms were already becoming outdated.

A number of authors have noted changes in domestic environmental policies around the same time that incorporate ideas consistent with the findings of WCED, even if actual implementation of such ideas has been slow. For example, Weale and Hajer discuss these changes as a move toward “ecological modernization” and away from the previous conventional wisdom that the balance between the economy and the environment was a zero-sum game.<sup>55</sup> Most of these changes in domestic policies followed on the heels of the Brundtland report, although strict causality would be difficult to determine as many of the changes occurred virtually simultaneously with the report’s findings. Nonetheless, Brundtland did provide a legitimating set of policy norms and responses to environmental problems that seemed to respond to the failures of policies in the 1970s. For example, Weale notes that a large number of OECD countries began to recognize that old environmental problems continued, despite expensive regulatory measures, while new environmental concerns, particularly transnational issues, gained greater prominence.<sup>56</sup> The responses advocated by the Brundtland Commission helped to reframe environmental policy discourse in a way states and various interested publics found palatable as responses to such problems.

Although Weale points to a large number of domestic socio-economic changes that contributed to these changes in domestic policies, he also notes that “the argument emerged,

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<sup>55</sup>Weale 1992, 23-32; and Hajer 1995, both of whom focus on the “discourse” of ecological modernization.

<sup>56</sup>Weale 1992. See also Hahn and Stavins 1991.

most notably in the Brundtland report, that environmental protection to a high level was a precondition of long-term economic development,” and that domestic reforms drew from these new ideas of ecological modernization articulated therein:<sup>57</sup>

This body of ideas became appealing to many members of the policy elite in European countries and international organizations during the 1980s.... Part of its appeal, I conjecture, is that it has the potential to break the political stalemate between the clean air advocacy and the economic feasibility advocacy coalitions. Once it is recognised that pollution control can itself be a source of economic growth... then the balance of argument in terms of economic feasibility is tipped toward clean air rather than away from it.<sup>58</sup>

These new ideas thus provided a certain fitness with general economic goals of relevant states and also responded to a growing public concern. This discussion should not imply that the approach taken here better explains the actual direction of environmental policies in any given country than factors identified in alternative approaches to explaining domestic policy. Rather, it simply shows that the norms promoted by Brundtland did find a fitness with the social purposes of states around this period. As will be shown below, those social purposes themselves also began to undergo changes that coincided with changes in the international political economy as a whole.

### **The Social Structural Environment and the Institutionalization of Liberal Environmentalism**

Chapter two demonstrated that a particular pathway from the Brundtland report led to liberal environmentalism. The line of thought on which Brundtland based its core findings clearly legitimated this pathway, but the shifting of economic norms in the international economic system helped to select how Brundtland would be used. The WCED and work of the commissioners mattered, but the selection process occurred in a changing international social structure that reinforced the legitimacy of the parts of Brundtland most consistent with liberal environmentalism.

Almost coinciding with the release of Brundtland, the new near-universal consensus on

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<sup>57</sup>Weale 1992, 31.

<sup>58</sup>Weale 1992, 79.

the emerging liberal economic order created ideal conditions for the report to get a serious hearing. As chapter two described, the shift in international economic governance became most apparent in the IMF and World Bank programs to combat developing country debt. The policies reflected an emergent economic policy convergence -- the Washington Consensus -- which supported the move to liberal market orthodoxy in the North and South alike.<sup>59</sup>

These changes in social structure provided a good fit for many ideas in WCED, which in turn helped to legitimate its framing of the environment problematique at UNCED. Recall that G-7 summit statements, later OECD environmental policy proposals, EC and EU environment programs, and a number of statements from international environmental gatherings demonstrated the impact of these ideas on future environmental policy research and programs, both domestically and internationally.<sup>60</sup> It should be noted that many of these research programs, internationally and domestically, focused heavily on market mechanisms and fit with liberal economic norms that promoted growth. Thus, they emphasized one particular pathway from the Brundtland Commission report most consistent with the research generated at OECD.<sup>61</sup> MacNeill's own work in the period between Brundtland and Rio further entrenched this particular pathway to Rio with his influential report to the Trilateral Commission.<sup>62</sup>

It is notable that economists often played a major role in such programs, but became empowered by liberal environmentalism as much as vice-versa (as the epistemic community literature might suggest). As norms around liberal environmentalism gained legitimacy, policy makers and political leaders enlisted environmental economists to formulate specific policies that fit with the new-found legitimacy for growth-oriented environmental policies.

The U.S. case provides an excellent example. Project 88, which I mentioned briefly in chapter two, came about not through the initiative of Robert Stavins, the Harvard economist who headed up the project, but through Senators Timothy Wirth (D-Colorado) and John Heinz (R-

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<sup>59</sup>Williamson 1993, 1329-1336; and Biersteker 1992.

<sup>60</sup>See chapter two. For G-7 summit statements see Hajnal 1989, 1991. For a summary of international statements in support of market instruments see OECD 1994a, 13.

<sup>61</sup>For a summary of international initiatives see for example, OECD 1994a; and Project 88--Round II 1991, 2-4. For Post-UNCED programs see, for example, OECD 1994b, 1995.

<sup>62</sup>MacNeill, Winsemius, and Yakushiji 1991.

Pennsylvania). The two senators saw an opportunity to bring greater legitimacy to ideas that had been promoted already, with only limited success, by non-governmental groups such as the Environmental Defense Fund. As Wirth put it:

Senator Heinz and I thought that economics was pervading everything else during the Reagan era and a lot of other issues were being looked at through an economic lens and why should environmental issues be excluded from that... environmental issues could not exist in a vacuum.<sup>63</sup>

Wirth approached Stavins shortly thereafter, not vice-versa. Stavins is even more blunt about the legitimation process that was central to getting new ideas accepted:

I think it's easy to forget that because the political landscape has changed so tremendously in regard to (market) instruments in the intervening years.... We had to be careful about how we approached this. After all, economists had been pushing these ideas for 30 years and the political process had been ignoring them. So it wasn't enough to just present the ideas. It's not the ideas that mattered. What really mattered was the framing, the packaging.... The most important article in the newspapers that led to the breakthrough of getting attention was by [columnist] Peter Passell in the New York Times.... [Passell wrote that] it's not so much what it says but who said it. And when [Passell wrote that] who said it was important, he wasn't referring to Stavins, he was referring of course to two senators, a Republican and a Democrat. He makes it very clear in the article and that was what was of critical importance.<sup>64</sup>

Stavins noted that even in the United States, where the compatibility of the market and environmental protection had been pushed throughout the 1980s, the ideas still had to be framed in a way to gain consensus from the environmental and, in the U.S. case, the non-Republican constituency. In The New York Times article referred to above, Passell drove home the importance of Senators Wirth and Heinz's support for Project 88 when he wrote: "Their imprimatur confers a new political legitimacy on economists' ways of thinking about environmental problems."<sup>65</sup> Similarly, the Brundtland Commission was able to frame issues, and gain publicity for that framing of environment and development, in a way that would find consensus within a very wide audience beyond the elites who interact with the OECD.

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<sup>63</sup>Timothy Wirth, author's interview.

<sup>64</sup>Robert Stavins, author's interview. The article referred to is Passell 1988.

<sup>65</sup>Passell 1988.



Project 88, as initially conceived, aimed at domestic environmental policy, and was not much influenced by the Brundtland Commission report. Nonetheless, because it influenced U.S. policy through the Clean Air Act amendments of 1990 (through tradeable permit schemes for sulphur dioxide emissions, for example), it helped to provide broad-based legitimacy for a more economic view of international environmental policy. Wirth believes that it made the Clean Air Act amendments possible. “Whether it was Project 88 that did it, it’s certain that Project 88 legitimized a lot of the things the Bush administration was trying to do,” he said.<sup>66</sup> This legitimation carried over into U.S. foreign environmental policy in the lead-up to and, to an even greater degree, following Rio when Timothy Wirth became the U.S. Under Secretary of State for Global Affairs, responsible for global environmental policy in the Clinton administration. According to Wirth, many of the ideas in Project 88 found their way into the U.S. Environmental Protection Agency, Department of Interior, and the State Department prior to Rio and informed the positions taken there.<sup>67</sup>

At the international level, the synergy between ideas in Project 88 and ideas of sustainable development as they had begun to be understood following Brundtland, facilitated the building of consensus toward Rio to overcome the North-South divide. In Wirth’s eyes, Project 88 is “absolutely” compatible with sustainable development. “Sustainable Development all has to do with the attempt to link environment and economics. Project 88 I hope contributes to an understanding of how you make sustainable development work.”<sup>68</sup> Such work contributed to allowing the United States, European and other OECD countries to go into Rio and, despite suspicions of developing country motives and the development side of the Rio agenda, agree on a basic set of governing norms with the South. Agreement was made possible because sustainable development could mean that a liberal economic order and environmental protection could be perceived as compatible.

Although projects such as Stavins’ and David Pearce’s in the United Kingdom were repeated much more in the North than in the South, the general normative changes in the

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<sup>66</sup>Author’s interview.

<sup>67</sup>Author’s interview.

<sup>68</sup>Author’s interview.

international economic order meant such ideas could more easily find synergies with the growing domestic consensus among states in the South as well. In addition, ideas around sustainable development found support within other United Nations governing institutions previously reluctant to incorporate environmental concerns. For example, I have already described the World Bank reforms and its leading role in the GEF. Recall that the Bank's influential 1992 World Development Report on environment and development, like WCED, argued that massive economic growth (3.5 times increase by 2030) is necessary for achieving other ends, including environmental protection and poverty reduction.<sup>69</sup> Brundtland made it possible for the World Bank to proclaim its new "green" image and still promote market liberalization, private property rights, and market-based instruments to change environmentally damaging behaviour.

While WCED did not cause these changes in the Bank, it did play an important normative role. It legitimated a form of international governance consistent with the Bank's general development philosophy – an emphasis on export-led growth, open markets, and domestic liberalization – while it also provided an opportunity for a response to environmental criticisms of its lending policies. WCED allowed what former Bank president Lewis Preston called the "win-win" strategy, whereby "links between efficient income growth and the environment need to be aggressively exploited."<sup>70</sup>

Other changes in environmental norms also found a fit with the wider normative environment. The de-legitimizing of the common heritage principle, for example, and its reinterpretation in the 1994 Law of the Sea agreement owed much to this social fitness. U.N. Secretary-General Javier Perez de Cuellar noted as much when he launched negotiations to overcome the impasse in Part XI (the provisions on deep seabed mining) of UNCLOS III. The report of the Secretary-General on the new agreement notes that de Cuellar felt that cooperation had become possible because, among other reasons, the "general economic climate had been transformed as a result of the changing perception with respect to the roles of the public and private sectors. There was a discernible shift towards a more market-oriented economy."<sup>71</sup> This

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<sup>69</sup>World Bank 1992b.

<sup>70</sup>World Bank 1992b, iii.

<sup>71</sup>UNGA 1994. The report was written under then secretary-general Boutros Boutros-Ghali, but refers to comments made by de Cuellar in 1990.

change in social interests or purposes among many states meant new common ground could be forged on the meaning of CHOM to reinterpret it to be in conformity with market norms. Taken as a whole, the final outcome of UNCLOS III legitimated sovereign control and market principles, thus it reproduced established norms at level two and three of social structure, much as did the agreements at UNCED.

### **UNCED Outcomes and Liberal Environmentalism**

Were the UNCED outcomes themselves completely pre-ordained by the legitimation of these set of norms? The answer is of course no. Any given set of international negotiations includes competition among specific interests, complex dynamics, and unexpected and non-predictable events. Nonetheless, the UNCED negotiations clearly did occur in the context of a relatively accepted set of legitimating norms around the concept of “sustainable development” and, I have argued, its legitimation as liberal environmentalism. Much of the legitimation had already occurred within the United Nations system and had been reinforced through multilateral fora such as those listed above and in chapter two. The micro processes through which this happens have been described by others with other terminology -- Ernst and Peter Haas describe it as learning, Gunnar Sjöstedt describes it as building consensual knowledge, and Oran Young, on a slightly more macro level, describes it as institutional linkages -- but the underlying phenomenon, I would argue, is the same as coming to use a common, and legitimate set of norms on which governance is built.<sup>72</sup>

At the level of process, the U.N. system itself reflects existing normative compromises in the international system. The various organizations and actors reproduce that normative structure in their activities, which, after all, depend on support from their state sponsors. Indeed, their legitimacy depends on it. As a U.N. process, UNCED undoubtedly reflected norms that had made headway within various relevant institutional arrangements within the U.N. system, and helped to create an environment for the normative compromises produced at Rio. Sjöstedt, for example, in looking specifically at the UNCED process, focuses on how what he terms the “UN bureaucratic-organizational culture” coloured UNCED consensual knowledge.<sup>73</sup> He notes that

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<sup>72</sup>Haas and Haas 1995; Sjöstedt 1994; and Young 1996.

<sup>73</sup>Sjöstedt 1994, 82.

activities of relevant functional agencies (for example, the World Bank and UNDP for poverty reduction or the FAO for the relationship between agricultural productivity and the environment) had direct input into decision-making and framing of problems by the UNCED secretariat, who called on the expertise within those agencies for issue clarification. As the process unfolded, the relevant agencies often helped fit national reports or particular problems into a conceptual framework and program language understandable within and across UN agencies involved. This institutional culture did not determine the content of particular policies outright, but gave some clues at the level of process of how the existing social structure of international politics gets reproduced on the micro-level, even when it evolves in novel ways such as in the framework of Agenda 21 – a creation of the UNCED secretariat.<sup>74</sup>

Similarly, learning that had gone on within states and the U.N. system about sustainable development made the more radical proposals of the South Centre, for example, seem almost anachronistic or a remnant of the NIEO period. Neither did the South Centre offer up a coherent alternative to “sustainable development.”<sup>75</sup> Hence, the proposals reminiscent of the NIEO, for example, did not muster the unified support necessary to achieve success at Rio. At the same time, norms such as the entrenchment of sovereign control of resources, resistance to the application of CHOM to biodiversity, and even more radical proposals such as a right to development, had more success because they could be framed as compatible with the norms of liberal environmentalism. It should not be so surprising, then, that even the United States could not succeed in straying from this consensus with, for example, its position that trade measures to protect the environment should be allowed under certain circumstances.<sup>76</sup> Liberal environmentalism, to maintain legitimacy, had to support an open international trading system. Overarching this entire process are dominant norms of international society that the U.N. system and its components both reflect and reproduce. The ideas around sustainable development set the path to Rio, but their interaction with the evolving international social structure gives the broader picture of how environmental governance changed to institutionalize liberal environmentalism.

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<sup>74</sup>Sjöstedt 1994.

<sup>75</sup>South Centre 1991.

<sup>76</sup>Kovar 1993.

## **Conclusions**

This chapter has argued that a socio-evolutionary approach is more enlightening than an epistemic communities approach to understand why international environmental governance evolved as it did since 1972. It showed that economic ideas were the source of many of the major developments in the normative evolution of environmental governance, but new norms did not simply arise as a result of those ideas, whether or not they were carried by a specific community of experts. Instead, ideas did or did not become institutionalized as governing norms based on their interaction with the existing social structure of international society.

Ecodevelopment failed whereas sustainable development succeeded because ideas around the latter found legitimacy in key policy making institutions such as the OECD. However, that legitimacy was not enough. Policy entrepreneurs had to use the legitimacy of the OECD to promote those ideas. When they successfully linked those ideas to the Brundtland Commission process, it provided added legitimacy to a wider government and non-governmental constituency in the North and South. Those ideas, although many had roots in earlier thinking about environment and development, successfully broke from previous thinking by reframing environmental protection in the language of economic growth. The fitness and interaction with the wider international social structure helped to select a particular pathway from the Brundtland Commission report to liberal environmentalism, and entrenched the most significant shift in global environmental policy since 1972 -- the shift from considering environment mainly in the context of environmental protection alone, to governing norms that now link virtually all global environmental action with liberal economic norms that promote growth.

Disentangling the causal chain of the three factors of ideational success is not easy. For example, UNCED not only reflected an emerging consensus on the proper norms for the international political economy, but may also have played a role in legitimating those norms. The fact that social structure is constituted by practices of actors makes such linear causal thinking inappropriate. Nonetheless, the conditions of entrance for new ideas and norms does suggest causal weight can be attached to the three factors identified in combination -- legitimacy of new ideas, fitness with social structure, and fitness with social purposes or interests of major states -- and that they reveal a process through which new norms get selected. Since UNCED also promoted some new norms not yet well institutionalized in international social structure, the

question remains whether these new challenges will seriously contest existing norms. For example, the increased activity and legitimacy of non-state actors might yet find openings to gain further legitimacy. Contestation of norms does not cease once they become institutionalized; rather the interaction of practices of actors and the social structure those practices constitute is an enduring condition of world politics.

Theoretically the chapter has attempted to move away from strictly rationalist conceptions of the influence of ideas on international governance to answer some of the critiques raised in the ideas literature. While a single historical study cannot make one overly confident of the usefulness of this approach to all international governance, it performed better than the epistemic communities literature in understanding the normative evolution of global environmental governance. It also seems promising as a way to resolve the dilemmas inherent in rational approaches to ideas and policy, while it attempts to provide a way to think systematically about the interaction of ideas and their environment while employing an interpretivist approach. Such an approach seems appropriate given the nature of ideas as involving meanings and of norms which are inherently intersubjective.

## Chapter Five

### Conclusion

This study has presented two major arguments. First, it demonstrated that the advent of sustainable development thinking ushered in the institutionalization of liberal environmentalism. This form of international governance promotes and maintains a liberal economic order while it attempts to minimize disruptions to ecological systems. Under liberal environmentalism, a liberal international economic order, privatization of global commons, and market norms are not only perceived as compatible with environmental protection, but necessary for successful incorporation of concern for the environment in the practices of relevant state and non-state actors.

The concept of liberal environmentalism owes some intellectual debt to John Ruggie's concept of "embedded liberalism."<sup>1</sup> Ruggie, drawing on the work of Karl Polanyi, essentially argued that the post-World War II multilateral liberal economic order was predicated upon domestic intervention. In other words, the liberal order created explicitly allowed governments to intervene in their economies to cushion the effects of free trade and financial flows. My position is similar to Ruggie's to the degree that I focus on the social structural basis of a liberal economic order as embodied in legitimating norms. In Ruggie's case, the legitimating norms of international liberalism included support for domestic intervention. However, I do not argue that liberal environmentalism is a compromise necessary for the legitimation of the liberal economic order promoted since the end of the Cold War, nor does the evidence in this dissertation substantiate such a position. Instead, I take the more modest position that the legitimation of environmental concerns in the international political economy has involved a process of introducing ideas about the environment that, to gain legitimacy, had to find a compatibility with the kind of economic order present at any given time. Environmentalism has not yet become a central pillar of the international political economy; thus it competes with a variety of social purposes in the construction of the international economic order. Nonetheless, I have argued that the growing importance of environmental concerns owes much to its formulation in norms of liberal environmentalism.

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<sup>1</sup>Ruggie 1983.

In at least one respect, however, this dissertation moves beyond Ruggie's arguments in that it introduces a new approach to explaining the processes through which particular forms of governance become institutionalized. Rather than relying on domestic compromises in dominant states as a starting point for the construction of international governance structures, as Ruggie does in explaining the origins of embedded liberalism, I begin with a recognition that international social structure is an evolving set of practices in which new ideas and forms of governance must make headway to gain legitimacy. From this starting point, I developed the second main argument in the dissertation, that the evolution of international environmental governance could be best understood in terms of a socio-evolutionary explanation.

This approach attempts to push forward the literature on the causal role of ideas by showing a way to understand the interaction of ideas and the norms they support with the social structure they encounter. The focus on social structure draws attention to the context in which state and other key actors attempt to build governance structures to address global problems. Such structures, I have argued, are not simply responses to material interests. Rather, a theory based on social structure endogenizes an important source of interests in that identities and interests stem, at least in part, from the social structure in which actors participate. Furthermore, the historical or evolutionary aspect of the approach is meant to reveal that social structure is not just a functional or closed system, but evolves in response to new ideas. Social structure is thus historically contingent, and the socio-evolutionary approach attempts to capture the dynamic way in which governance structures evolve in response to new global problems, but always in the context of an existing normative environment.

Below, I discuss the implications and limitations of these findings for the theoretical understanding of global environmental politics, for international relations more broadly, and for the policies and practices in place to address global environmental concerns.

## **Theoretical Implications**

### *The Normative Basis of Governance*

I began this study with a detailed examination of the normative basis of environmental governance. The focus on norms turned attention to the content of governance, rather than to an explanation of whether cooperation on particular environmental problems occurred. It thus acted



as a corrective to rational cooperation and neoliberal institutional literature, which tend either to ignore or to treat as irrelevant the content of policies promoted in cooperative arrangements. The main reason for this neglect is that such approaches take interests as given, thus unexplained. For example, a recent, and fairly comprehensive, review of the international regimes literature -- still the dominant research program on international cooperation -- dealt almost exclusively with issues of design, classification, and effectiveness. It paid very little attention to the norms the regimes actually promote, the implications of such norms, or why the ideas on which those norms are based were selected.<sup>2</sup> The contractarian, rational-interest basis of most regime analysis generally puts such questions outside the scope of analysis, as I argued in the introduction.<sup>3</sup>

My focus on norms is not meant as a replacement of studies based in contractarian, rational-interest approaches, which might lead to useful conclusions on the requirements for stable institutional arrangements, for example. But I do aim to promote a more critical evaluation of what *kind* of environmental governance is actually being achieved, a vitally important question for theory and policy.

Although I did not undertake an assessment of the effects of liberal environmentalism, identifying this norm-complex is the first and necessary step to allowing such an exercise. Such assessments might more carefully examine the impact of norms on particular policies and critically examine what criteria of evaluation these norms produce. For example, what does a particular norm-complex mean for issues of equity (between generations, rich and poor states, societal groups, and so on), environmental quality, or cost-effectiveness? The rational cooperation literature truncates debate on these fundamental issues at the heart of designing institutions to address global environmental problems.

### *Ideas, Social Structure, and Change*

The ideas literature in international relations developed as one attempt to introduce these questions back into the study of international institutions and cooperation. When used in

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<sup>2</sup>Levy, Young, and Zürn 1995.

<sup>3</sup>Levy, Young, and Zürn 1995, 306-307, 312-313, seem to recognize this limitation when they point out that more research should be conducted using a constructivist approach, for example, and other alternatives to contractarian analysis, which takes interests as given.

conjunction with the rational cooperation literature, however, such studies too often take it for granted that cooperative solutions reflect progress on the problem being addressed. The epistemic communities literature is particularly susceptible to this problem since authors of studies in this vein almost exclusively examine new ideas that they believe will lead to progress. Hence, such studies tend to look at how new knowledge can alter interests to facilitate cooperation, without questioning why some ideas succeed over others. This problem, as I pointed out in my critique of the epistemic communities literature in chapter three, leads some scholars to an overly optimistic view of the ability of new ideas to alter international relations in a positive direction. Thus an assumption prevails that states can relatively easily “learn” to alter their definitions of interest, and thus create or change international institutions in response to their enlightened views. In recognizing that new ideas do not exist in a social vacuum, my focus on social structure supports a less sanguine view of the ability of new ideas to change international relations. Instead, social structure is seen to powerfully select certain ideas so that change, especially at deeper levels, generally occurs in a slow and evolutionary fashion.

Yet change does occur in international relations in response to new ideas about legitimate behaviour, or to new purposes of action such as responses to global environmental problems. I have not, however, introduced a general theory about the rate of evolutionary change or the conditions for large transformations. Research that focuses on such change in international politics often concerns massive disruptions such as major war, revolution, or economic upheavals. By focusing on a particular area of governance, especially one that has arisen relatively recently to prominence, I have shown the slow process of evolutionary change that continues to occur between such major upheavals. But more research might fruitfully be done to better specify the conditions under which quicker or slower change might be expected. As a preliminary observation, however, this case suggests that new issue areas often compete against existing social purposes and gain prominence in governance structures in large part by finding a fitness with those structures, although in so doing they also may inject pressures for change. In addition, since ideas are based in meaning and intention, and social structure is based in

intersubjective understandings, the human potential to alter such structures, even if it is highly constrained, is always present.<sup>4</sup>

Naturally, a focus on the content of governance turned attention to the ideas literature in international relations. I argued that in the absence of the ideas associated with liberal environmentalism, the form of governance institutionalized at the Earth Summit would not have arisen, nor was it likely that environmental concerns would have come to play as prominent role as they have in international governance more broadly. The introductory chapter showed that ideas mattered and could not simply be derived from the material interests of dominant actors nor from the material structure of the international system. If not for the introduction of ideas about environmental problems and about how the international community should address those problems, it is unlikely that the environment could have made the headway it has in international discourse and action.

The early attempts at global environmental governance achieved only limited success because ideas had not been developed to bring the North and South together in a way consistent with other trends in international governance. The initial ideas presented at Stockholm by the conference secretariat did attempt to bring disparate interests together, and in some ways provided the basis for environmental governance as it would develop over the next 25 years. But the ideas promoted at Stockholm could not fundamentally alter the basic underlying interests of North and South nor did they provide a way to conceive of how environmental governance could avoid a challenge to core aspects of international social structure or the direction of governance that either the North or South supported. The ideas contained in the Brundtland Commission were a breakthrough in that respect. For the first time, a set of ideas successfully reframed environmental concerns in a way that could be compatible with dominant norms in the international social structure. Thus, they were much more likely to alter the understandings of interest of major states in the North and South. As international social structure evolved at level three to reflect the move away from international Keynesianism and more toward the

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<sup>4</sup>I have focused only on ideas as a source of change in international relations. I recognize that large shocks such as war or changes in technology could also cause change. Nonetheless, apparently exogenous shocks such as war might be fruitfully explored within this framework since even major wars occur in the context of existing social relations. The contestation that may underlie such conflicts often occurs at deeper levels of social structure and is explored in Busumtwi-Sam and Bernstein 1997.

“Washington Consensus” of liberal market norms, the aspects of sustainable development most consistent with such norms gained favour.

In the above story, ideas mattered in that they had to be developed by some group and needed to gain legitimacy in key organizations that could promote them, such as the OECD and then the Brundtland Commission. Thus previous chapters traced through in detail from where and whom such ideas originated and were promoted, and how they made their way into the key norm-articulating events identified. Chapters three and four then turned to various strands of the ideas literature in international relations to try to answer why the particular set of ideas associated with liberal environmentalism came to dominate environmental governance. Ultimately, I argued that what made ideas of liberal environmentalism successful was not simply their promotion by legitimate groups, but their fitness with an evolving social structure. It is this interaction of ideas and social structure that the socio-evolutionary approach uncovers.

### *The Causal Role of Ideas*

In my attempt to contribute to the literature on the causal role of ideas in international relations, I differentiated between the rationalist and interpretivist use of ideas and placed my approach in the latter camp. However, I argued that a socio-evolutionary explanation could still identify causal factors that lead to the selection of some ideas over others.

Before turning to that approach, I tested an epistemic communities explanation of how environmental ideas became institutionalized. I chose this explanation because it contains within it an argument about why some ideas in particular mattered, that is, ideas that had legitimacy rooted in an expert group privileged by its cause-effect knowledge and driven by principled beliefs based on such knowledge claims. Thus, it appeared to answer the two questions left unanswered by rationalist approaches: where did ideas come from and why did they get selected? In this case, the hypothesis posited that the ideas came from a group of ecological scientists whose ideas were selected because of the legitimacy of their consensual cause-effect knowledge claims. I also chose this explanation because international environmental governance is a crucial case for the hypothesis, which makes the findings here of more general relevance for evaluating the usefulness of the approach. An epistemic communities explanation should have performed best in explaining the content of governance in an issue area, such as the environment,

characterized by complexity and uncertainty and that requires technical expertise to both understand the problem and to formulate solutions.

Despite the promising attempt to bridge the rationalist/interpretivist divide, chapter three found that the hypothesis failed in key respects to account for the evolution of international environmental governance or even to identify the process of scientific influence on international environmental activities or agreements. Some of the difficulties related to the actual way in which scientific knowledge did or did not influence environmental governance. I discuss those issues in a subsequent section. In this section, I will confine my remarks to the limitations my findings suggest for the hypothesis or the epistemic communities approach more generally.

First, I took issue with the assumption of the hypothesis that the causal knowledge of the community informs its principled beliefs. In regard to environmental governance specifically, Haas uses this assumption to argue that a community of scientific ecologists “sought to develop social laws from their understanding of the laws of nature.”<sup>5</sup> The evidence does not support such a position since “social laws” could not be easily derived from the cause-effect research undertaken by the group, nor do most scientists appear willing to support such a linkage. If anything, the history of ecological science shows that strong debates persist about the proper focus and methods for research and the relationship between research and environmental policy. Indeed, chapter three demonstrated an uneasy relationship between scientific research and the environmental values Haas has repeatedly attributed to his ideal-type scientific ecology community.

Chapter three also challenged a related implication of the approach: that policy choices can, and ought, to stem primarily from objective science. This underlying orientation of the epistemic communities approach is revealed in Haas’s argument “that science is essential for the understanding of global environmental problems, thus shifting the determination of the scope of allocative decisions to the international institutions for science.”<sup>6</sup> This statement cannot be sustained empirically in the case of environmental governance. The more subtle theoretical point, though, is that the epistemic communities literature is biased toward finding ways to

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<sup>5</sup>Haas 1996, 27-28.

<sup>6</sup>Haas 1996, 1.

increase the influence of science on policy since the literature makes the assumption that such policies would best reflect the “objective truth” of the situation, to the best understanding of the time. The link between scientific research and policy proposals requires a more critical analysis to unpack that relationship. In addition, while scientists themselves are often concerned about their social responsibility and informing policy to the best of their ability, many of those most active in global change research also appear to recognize the political and social nature of choices. Whether this is true of other issue areas, the relationship between the truth-claims of an expert group and their policy activities ought to be made explicit, not assumed.

Finally, the individuals most directly involved in communicating scientific knowledge to policy makers often do not fit a strict definition of an epistemic community. A number of studies on international environmental issues have shown that primary researchers are not the main source of scientific advice to policy makers. These studies identify “knowledge brokers,” “policy researchers,” or “science managers” as more often serving as intermediaries between those who produce knowledge and those who make policy.<sup>7</sup> While some of these individuals are scientists, others are not. It may be that some are influenced in their value orientation by scientific endeavours; however, it is equally plausible that their influences include their own institutional or bureaucratic settings or personal histories. Regardless, the epistemic community literature cannot capture the link between science, this wider group, and their influence on policy.

The socio-evolutionary approach attempted to move the discussion away from a focus on an expert group alone, and toward the interaction of ideas with their environment. In the formation of international norms, that environment is the existing set of norms that make up the international social structure. Because international social structure is constantly evolving in response to the institutionalization of new norms and altering of old ones, the socio-evolutionary approach lends itself naturally to an interpretivist methodology. The content, in terms of meaning, of social structure must be investigated at any given time as the environment in which new ideas compete. The approach is limited in its ability to model strict causal relationships because the fitness of ideas associated with liberal environmentalism was historically contingent.

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<sup>7</sup>Litfin 1994; Timberlake 1989; and Boehmer-Christiansen 1994a.

Nonetheless, a kind of causality is evident that makes the approach something more than a purely interpretivist endeavour. Factors can be identified that make some ideas more likely candidates for institutionalization or legitimation than others. Even though these factors, such as social structure or ideas, are based in understandings of meaning, they can still possess causal weight. I found Ruggie's notion of "narrative causality" useful in contrasting the causal weight of ideas, norms, and institutions with the formal causality characteristic of the physicalist world.<sup>8</sup>

The socio-evolutionary approach moves even further toward an explanatory approach than simply identifying the social structure and positing its causal weight; it emphasizes that specific factors can be identified that reveal processes through which these meanings evolve.

I have argued, for example, that the legitimacy of ideas within a privileged expert group, even when those ideas are disseminated within bureaucracies by members of that group, is not sufficient, nor even necessary, for the acceptance of new norms or changes to existing norms. The perceived legitimacy of the carriers of new ideas is important, but can be gained also through the legitimacy of key institutions through which they act. In this case, the OECD in Paris was such an institution in the realm of public policy, and especially economic policy, among its member states. Even then, however, the selection process of new ideas also involves fitness with existing social structures and with the social purposes of dominant states. These factors in combination had causal weight.

As I mentioned in chapter four, the interrelationship between these factors, particularly the last two, leaves me open to the criticism that they are not discrete variables in the positivist sense and thus cannot be subject to rigorous testing. Nonetheless, I would argue that social structure is a real structure that regulates and constitutes the identities, interests, and behaviour of key actors in the international system. So while this approach is not directly testable against a rational choice approach, it does identify real factors that shape international environmental governance and provides a systematic way to explain the process through which some ideas get selected over others.

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<sup>8</sup>Ruggie 1995. Admittedly, I have skirted over the issue of the relationship of the social world to the material world. I would argue, however, that investigating the content of social structure historically is sufficient methodologically for this approach, even if social structure ultimately interacts with material structure. This sort of chicken and egg problem is likely an unsolvable dilemma of social life. However, accurately identifying social structure serves a useful shorthand for the manifestation of material interests, which, I have argued, are meaningful only in the context of social structure in any case.

## **Empirical and Policy Implications**

The findings also raise a number of issues that relate more directly to policy questions or analysis of the processes of international environmental governance. Below, I review some of the key findings about the interaction of scientific and economic ideas with global environmental governance. Then I discuss some of the implications of liberal environmentalism.

### *Scientists, Economists, and Environmental Governance*

One major empirical finding was that the influence of scientific ideas and scientists did not work in the way suggested by the epistemic communities literature. Contrary to Haas's assertion quoted earlier, scientists are largely excluded from allocative decision-making and often eschew such roles.<sup>9</sup> Chapter three should not be read to suggest that environmental scientists, or various environmental or ecological ideas they supported, did not affect specific policies or influence governance at all. Individual and groups of scientists often played significant roles in identifying environmental problems and have been called upon to monitor and assess environmental problems. Similarly, some ecological ideas have been taken up in formulating various environmental policies.

However, chapter three did challenge scientists' primacy in governance. It also challenged the claim that the basis of their influence rested on their consensual knowledge and principled beliefs. Indeed, consensus on environmental problems often came after substantial political responses had already occurred, as in the case of ozone depletion. Little evidence supported the presence of a strong consensus on values within groups of active scientists, apart from perhaps a support for scientific research itself. When communities did arise to address particular problems, and then pushed policy makers for a response, the kind of action proposed tended to be general in scope (for example, reduce greenhouse gas emissions), or did not seem to possess any particular causal weight over and above other, non-scientific, considerations. With the exception of the Precautionary Principle, few norms could be attributed to specific values associated with scientific research on the environment. Support was not found for the argument

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<sup>9</sup>Bolin 1994. See also Sherwood Rowland's comments in Brodeur 1986, 80-81 who lists a number of reasons why scientists are not more active.



that the legitimacy of the current forms of environmental governance stemmed from an epistemic community. Even in the case of the Precautionary Principle, the relationship between scientific research and values was not captured by the epistemic community literature.

I did not attempt to identify a definitive pathway through which scientific knowledge fed into international environmental activities, but the evidence suggests that the pathway is less linear than the epistemic communities literature would have us believe. The evidence also showed that influence depended on entrepreneurial scientists or knowledge brokers and that the political environment shapes policy relevant research as much as vice-versa. Finally, despite the centrality of science to an understanding of global environmental problems, scientists and scientific organizations played only limited roles in each of the three norm-articulating events on which I focused. Chapter three summarized some of the possible reasons for this limited influence of scientists on policy.

A second set of implications for the role of science relates to the relationship between scientific research and governing structures. One concern relates to the way an epistemic communities approach biases what an analyst might see in examining environmental governance: a narrow focus on a scientific ecology epistemic community -- of whose existence as a coherent group I found little evidence -- leads to the erroneous conclusion that environmental governance now faces a backlash from rules and principles of trade regimes and market challenges at domestic levels.<sup>10</sup> That misses the compromise of liberal economic and environmental norms at the heart of liberal environmentalism. It also misses how policies that Haas perceives as external challenges, in reality fit with this form of governance. Thus, an epistemic communities approach obscures the actual norm-complex at the heart of international environmental governance and the most significant shifts in that norm-complex over the last 25 years.

Chapters three and four demonstrated that these shifts in environmental governance have themselves affected research and advice on how to address global environmental problems. Those chapters highlighted the reciprocal influence of social structure on the generation of new ideas, a two-way influence obscured by studies of epistemic communities that look only at the origination of ideas within a particular expert group. As noted, transnational research networks increasingly focus on questions that fit within a liberal environmental framework and

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<sup>10</sup>Haas 1996, 43-44.

governments increasingly have taken control of specific bodies set up under international agreements to research or monitor specific environmental problems. For example, chapter four described the changes made in the composition and focus of Working Group III of the Intergovernmental Panel on Climate Change. For the second assessment report (1995) the working group included more economists and focused on cost-effective policy responses that fit with research programs consistent with liberal environmentalism.

These changes might even affect research at more basic levels. For example, Donald Worster suggests that ecology has evolved to be more politically realistic and human centred in line with sustainable development and adaptability to eco-systems.<sup>11</sup> This position might fit better with liberal environmentalism than the ecology of the 1960s and 1970s. However, the ways in which basic research might be affected by these broader social forces requires more in-depth study than has been attempted here and might be better explored within the science policy or history or sociology of science literatures.

Chapter four also highlighted the role of economists and economic ideas. While it might be tempting to portray economists as an epistemic community in environmental governance – they do exhibit a high level of consensus on cause-effect relationships and policy prescriptions – that would be misleading.<sup>12</sup> In general, this group is not a promoter of specific environmental values nor an independent force for social change toward a more ecologically-based social system.

However, in one respect economists did fit the definition of an epistemic community in that the value system promoted by many economists seems to fit with the basic tenets of the economic theories with which they work. Although I did not survey a wide number of economists, the following comments by Robert Stavins supports the above position. He believes that while many individual economists might be driven to study environmental questions because they find them interesting or they have some concern for the environment, the values their work supports tend to come from their economic training:

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<sup>11</sup>Worster 1993.

<sup>12</sup>Jim Bruce (author's interview) noted that economists in IPCC working group III for the 1995 report had a far greater consensus on core policy questions than the natural scientists involved.

Economics is obviously value laden. Just the notion of Pareto-efficiency or cost effectiveness or anything else is an expression of values.... That you should worry about minimizing costs or maximizing utility for the greatest number, that is obviously a value system. And it's pretty difficult to go to graduate school, do a Ph.D. in economics, and not come out of it with some internalization of that value system. That it makes sense to think of issues as *ceteris paribus*, let's take the goal as given now... that inevitably takes one to the notion of market-based instruments for a pragmatic reason.... I think it's the attribute of cost-effectiveness and dynamic efficiency... that drives economists to do it.

Despite this underlying set of values, however, I did not find evidence that an identifiable network of economists acted as a community to push environmental governance in a specific direction.

Rather, by virtue of their legitimate positions in key institutions and public policy making generally, governments have called upon economists to formulate policy responses in line with their professional work. For example, Stavins, the lead researcher of Project 88 in the United States, said he had little or no contact with similar research programs in other countries, or in multilateral institutions such as the OECD or the World Bank, until well after his project got underway. Only then did policy makers call on his expertise to help formulate international policy.<sup>13</sup> In other words, while these economic ideas existed in the profession, it was not a group of economists driven by a concern with the environment who were the main cause of the shift in international norms.

Only recently, long after many norms of liberal environmentalism have appeared in international environmental agreements and practices, are economists attempting to coordinate their activities to promote political action. Their interaction in policy exercises promoted by governments seems to have brought a number of interested economists together. For example, in 1997 more than 2,000 economists issued a joint statement (and released it at a press briefing in Washington, D.C.) that the United States would be able to reduce its industrial emissions of greenhouse gases to slow global climate change in a way that would not damage the economy. The thrust of the statement, written by five leading economists and signed by about 2,000 others, was that well-designed policies relying on market mechanisms "may in fact improve U.S. productivity in the longer run." The statement explicitly endorsed a system of market

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<sup>13</sup>Robert Stavins, author's interview.

mechanisms, such as carbon taxes or trading of marketable emissions permits among countries. What is remarkable about this event is not the position taken, which fits very well with widely accepted views of environmental economists, but that three of the five economists who wrote the statement – Kenneth Arrow, Dale Jorgenson, and William Nordhaus – served as authors or advisors to Working Group III of the IPCC at various stages of the process. (Paul Krugman and Robert Solow were the other two main authors. All five are highly respected in the economics community and Arrow and Solow are Nobel Prize winners).<sup>14</sup> Again, the reciprocal influences of social structure and research seems to be at work. Just as economic ideas have influenced environmental governance, so too has involvement in activities related to international environmental governance influenced changes within the economics profession and its work.

The success of economic ideas suggests that ideas that do receive attention depend on their ability to make headway in key policy making institutions. In addition, ideas have to be able to generate coalitions of like-minded actors in decision-making roles. Ecodevelopment, for example, could not achieve what sustainable development did. These last two points are interrelated in that the fit with institutional norms and broader social structure and the legitimacy of institutions that carry ideas made a difference when weighing the impact of ideas generated by the OECD, IUCN and UNEP.

More work might be fruitfully done on the differential power and legitimacy of various international organizations and networks. In the case of environmental governance, I found, for example, that the OECD played an extremely influential role, at least in the late 1970s and 1980s. Few studies have examined specifically the important role the OECD plays in international governance as a source of policy ideas and influence.<sup>15</sup> While a number of analysts note the power of the IMF and World Bank, for example, which have direct financial levers on governments, the more subtle influence of organizations such as the OECD and Trilateral Commission deserve more attention.

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<sup>14</sup>Reuters 1997.

<sup>15</sup>One exception is Robert Keohane's review (1978) of the influential McCracken Report, although he looks more at the report than at the OECD's power *per se*. One of the few systematic studies that might fall into this category is Stephen Gill's 1990 book on the Trilateral Commission.

Further research might also usefully examine how international norms are transmitted to the domestic level or across a wide range of actors. Here, I assumed that such influence occurs, but stopped after identifying the norm-complex among international institutions and practices of major actors in their interactions at the international level. Some recent research that stems from comparative politics and transnational relations has begun to take up the question of how norms are then transmitted. For example, Martha Finnemore's works on how international organizations can act to "teach" norms to governments, and Kathryn Sikkink's work on issue networks, propose promising avenues for further research on how ideas and norms might move from the international to the domestic level or across states.<sup>16</sup> Similarly Thomas Risse-Kappen's work on transnational relations more broadly has attempted specifically to address under what conditions networks of actors can carry ideas across various levels of governance.<sup>17</sup> Risse and Sikkink have also recently begun a research program that addresses how international norms are implemented domestically and affect political transformation processes.<sup>18</sup>

### *The Compromise of Liberal Environmentalism*

This dissertation has made much of the influence of specific sets of ideas on the evolution of environmental governance. It might be objected, though, that the reason liberal environmentalism gained prominence is simply that the policies it promotes perform better in achieving environmental goals. In other words, liberal environmentalism is a rational response to policy failures of the 1960s and 1970s domestically or their inability to generate international action. Some of the comparative environmental policy literature hints at this position. For example, Weale's study, mentioned in chapter four, lends some support to the position that the poor performance of expensive regulatory policies in a number of Western states led to the search for alternatives.<sup>19</sup>

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<sup>16</sup>Finnemore 1993; Sikkink 1993; and Keck and Sikkink 1997.

<sup>17</sup>Risse-Kappen 1995.

<sup>18</sup>Risse and Sikkink 1997.

<sup>19</sup>Weale 1992.

Such a position is unsatisfactory, however, for two reasons. First, the perceived failure of one set of policies does not then determine what will replace it. The introduction and acceptance of new ideas still requires explanation. This is especially true in terms of the timing of the acceptance of new ideas. As chapter four emphasized, ideas associated with liberal environmentalism had been around at least since the late 1960s, yet gained prominence decades later. Their acceptance cannot thus simply stem from their inherent “truth” or come from being “good” ideas.<sup>20</sup>

If one looked only at the range of economic ideas available, a set of ideas associated with a “green” international political economy seemed a more obvious direction toward which international environmental governance might have steered. Recall Eric Helleiner’s identification of a distinct and relatively well-developed set of economic ideas that pose an alternative to liberal environmentalism and which have varying levels of support among environmentalists and ecological economists. Some of these ideas fit with liberal environmentalism, while others are radically different. For example, according to Helleiner, a “green” political economy shares with what I call liberal environmentalism a distrust of statist economic planning and encourages small-scale markets. However, unlike liberal environmentalism, a “green” political economy strongly opposes large-scale rational and global economic integration along free market lines.<sup>21</sup> In contrast, liberal environmentalism takes a view consistent with Helleiner’s description of liberal international political economy theories, that “environmental problems are caused primarily by imperfectly functioning markets and inadequate regulatory frameworks, problems which [liberals] think it is possible to remedy through alternative pricing mechanisms and institutional reforms.”<sup>22</sup> Interestingly, many of the ideas Helleiner identifies fit much more closely with the more radical proposals of ecocodevelopment which have largely been pushed to the margins, as chapter four showed.

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<sup>20</sup>See also Woods 1995, 168, who focuses on the limitations of the “discovery” view of new ideas – that policies change when new good ideas are discovered.

<sup>21</sup>Helleiner 1996, 70.

<sup>22</sup>Helleiner 1996, 70, referring to works such as Haas, Keohane, and Levy 1993; and MacNeill, Winsemius, and Yakushiji 1992.

Second, if liberal environmentalism were simply a rational response to earlier policy failures, one would expect clear signs that theories and policies associated with the new approach outperform the policies they are meant to replace. A hypothetical comparison might be drawn then between the rise of liberal environmentalism and the rise of Keynesian economics. For example, Albert O. Hirschman, citing classic research on how Keynesian economics came to the United States, suggests those ideas provided a response to the protracted Depression of the 1930s. The apparent ability of Keynes's theory to both predict the economic outcomes of the period and to offer policies in response made them highly persuasive in the United States, where they first gained policy prominence (although a number of political and administrative factors have been put forward that subsequently limited their influence).<sup>23</sup> As Hirschman has put it, "Seldom in history were the basic propositions of an economic theory so strikingly confirmed by events as during the 1938-1945 period in the United States. Shortly thereafter, the ability of government spending to energize the economy and to drive it to full employment... was taken as another, more positive demonstration of the correctness of Keynesian analysis."<sup>24</sup>

This view does not hold up well in the case of liberal environmentalism, however, because little evidence currently exists for the greater policy effectiveness of ideas associated with it.<sup>25</sup> However, supporters of liberal environmentalism had one advantage Keynesian economists did not; their ideas fit with the prevailing economic orthodoxy and practices promoted by the most powerful states and international institutions. In this way, it became relatively easy to convince the wider economics and environmental policy communities to pursue liberal environmentalism, even though the evidence to date does not support the position that these ideas work better at achieving environmental policy goals. Empirical research is only

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<sup>23</sup>Hall 1989a.

<sup>24</sup>Hirschman 1989, 349.

<sup>25</sup>OECD 1992a. Although Hirschman presents this rational response argument in the case of Keynesian economics, the Hall volume (1989a) as a whole finds it unconvincing. Peter Hall, for example, argues that this "economist-centred" explanation is incomplete since economic theories and the economists that supported them waxed and waned in influence in comparison to other influences on policy. He argues for a more complete model of the policy process that looks at the interaction of ideas with their policy environment – administrative, political and economic.

beginning to study the relative merits of market instruments, for example, and those studies are inconclusive.<sup>26</sup>

Even on efficiency grounds -- where the arguments for policies dictated by liberal environmentalism should be strongest -- the evidence to date is inconclusive. For example, a 1994 OECD report recognizes that markets may not always behave as economic theory predicts, implementation of market-friendly environmental policies may be more difficult than assumed, and the politics of environmental policy-making makes the selection of instruments and policy perspectives more complicated than assumed.<sup>27</sup> Given that the track record of such policies at the domestic level does not demonstrate superior performance over other types of policies, there is little reason to believe results will differ at the international level or that they deserve promotion over other approaches by international institutions. In explaining why such policies might be chosen regardless, Majone argues that because policy instruments are rarely ideologically neutral, their selection often depends on factors other than their effectiveness:

[W]hether one prefers administrative measures or economic incentives to control pollution seems to depend at least as much on philosophy and ideology as on the technical properties of the two approaches. Those who favor the extension of market principles to previously non-priced resources like air and water in the name of efficiency naturally prefer market-oriented regulatory instruments, while those who oppose the encroachment of utilitarian principles in social life tend to oppose them.<sup>28</sup>

Majone also demonstrates the difficulty in comparing various approaches to combating pollution along any set of consistent criteria, since they are conceptually so different.

Similarly, the OECD study cited above reports that, "Non-economic instruments may work equally well or even better than economic incentives... since the efficiency and effectiveness arguments associated with economic instruments are not always applicable, as a review of the history of environmental policy instruments discloses."<sup>29</sup> The study concludes that probably a "cocktail" of economic incentives and regulatory command and control measures is

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<sup>26</sup>See OECD 1994.

<sup>27</sup>OECD 1994a. See also Majone 1989, 116-143.

<sup>28</sup>Majone 1989, 117.

<sup>29</sup>OECD 1994a, 35.



the best option. "Economic incentives appear to operate best in combination with, or in support of, other instruments such as direct regulation. Economic incentives alone will not effectively and/or efficiently deal with environmental problems, whether national or international ones."<sup>30</sup> The 1996 report of the U.N. Commission on Sustainable Development echoes these views, stating that, "Far too little evidence is available on the practical achievements of economic instruments... [to know] whether they live up to expectations...." Yet the thrust of the report still endorses their use and norms more broadly reflective of the Earth Summit outcomes.<sup>31</sup>

My argument has been that despite these ambiguous findings, liberal environmentalism still pushes for market-friendly over other possible alternatives. For example, internationally, the OECD promotes economic instruments over regulatory instruments in the implementation of international trade agreements and continues to devote environmental research to issues such as cost-benefit analysis and economic instruments. The implication is that the criteria upon which environmental institutions are evaluated may turn more toward economic efficiency than pollution abatement or environmental quality.

Climate change has been subjected to such analysis which has received a serious hearing within the IPCC and climate negotiations. A recent OECD study on climate change supported this position, suggesting that deciding on proper policy instruments for the abatement of greenhouse gases should be based primarily on economic efficiency criteria. The main choice it presents are also between two market mechanisms, a global carbon tax and tradeable emission quotas.<sup>32</sup> Such studies tend to gloss over questions of what criteria are to be used when evaluating costs and benefits. For example, given high levels of uncertainty as to the effects of climate change and a number of external variables related to economic performance in different parts of the world, many assumptions must be made about what the impact of various policies will be. Ultimately, the choice of normative criteria, such as whether and how to weigh costs and benefits to future generations or across regions must be incorporated. Such considerations can

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<sup>30</sup>OECD 1994a, 48.

<sup>31</sup>UNCSD 1996.

<sup>32</sup>OECD 1995, 9.

change calculations radically.<sup>33</sup> It still may be possible for economists to incorporate such criteria into cost-benefit analysis, but it may also be that liberal environmentalism limits debate on such issues or leaves such choices to economists who are empowered by the legitimacy given to market principles and neoclassical economic analyses.

A danger also exists that a radical free market position could gain legitimacy under such an approach – although liberal environmentalism as I have described it does not go to this free market extreme. “Free market” environmentalism eschews any attempts to incorporate social or environmental costs or discount rates for the future as too intrusive and likely to lead to perverse results.<sup>34</sup> In fact, some adherents to what I call liberal environmentalism do support government intervention or international management to correct market imperfections or build environmental markets.

Nonetheless, a related problem arises because the advice of environmental and ecological economists is only being partially heeded. Liberal environmentalism tends to support arguments for creating markets, property rights, deregulation and an end to subsidies. However, the norm-complex has yet to embrace the more radical proposals that often will have the largest pay-offs for the environment, such as changing accounting practices, large-scale shifts to environmental taxation, or truly integrating environmental considerations into conceptions of social welfare. Major actors view such proposals as too intrusive to free enterprise and the smooth operation of the international liberal economy, or politically unrealistic.<sup>35</sup> Even leading proponents of market mechanisms and an economic approach recognize that other goals for environmental policy might be important. Hahn and Stavins, for example, put it this way:

In the economist’s version of public-policy heaven, the objectives for policy will typically be efficiency (maximizing net benefits) or cost-effectiveness (choosing the least costly method for achieving a goal). Efficiency and cost-effectiveness however, are by no means the only possible criteria for judging environmental policies. Other considerations

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<sup>33</sup>Howarth and Monahan 1996.

<sup>34</sup>Anderson and Leal 1991. Note, however, that the supporters of “free market” environmentalism seem to misunderstand many of the compatibilities of current formulations of sustainable development with their position, thus they set up any environmental intervention as a target for attack.

<sup>35</sup>See for example MacNeill, Winsemius, and Yakushiji 1991 where all these proposals are brought forward, yet political support has been found mainly for action on proposals consistent with liberal/market norms. See also Weale 1992, 157; and Goodland, Daly, and Serafy 1993 who argue for the need for environmental accounting.

might include overall effectiveness, ease of implementation, equity, information requirements, monitoring and enforcement capability, political feasibility, and clarity to the general public.<sup>36</sup>

Deeper critiques of the implications of liberal environmentalism are also present in the literature. For example, Chatterjee and Finger argue that the type of environmentalism promoted at UNCED left unexamined the industrial processes and unsustainable economic models that caused the current environmental crises. They view the outcome of the Earth Summit as follows:

...UNCED has promoted business and industry, rehabilitated nation-states as relevant agents, and eroded the Green movement. We argue that UNCED has boosted precisely the type of industrial development that is destructive for the environment, the planet, and its inhabitants. We see how, as a result of UNCED, the rich will get richer, the poor poorer, while more and more of the planet is destroyed in the process.<sup>37</sup>

While this dissertation has not independently assessed the merits of these critiques, it opens up space for the questions they raise which are obscured by other approaches in the international relations literature.<sup>38</sup> I would argue it is not enough simply to critique the forms of environmentalism of which one does not approve; the way in which they arise and become institutionalized should first be recognized and revealed. Only then can serious debates occur about the possibilities for change, honest assessments of the merits and limitations of various approaches take place, and a deeper understanding of actual social forces at work and their effects be achieved.

## Conclusion

At the beginning of this dissertation, I posed the question of whether ideas associated with global environmentalism really implied a transformation of international relations and society. In some ways, the advent of liberal environmentalism does suggest a transformation has occurred. Environmental concerns now regularly appear on the agendas of international organizations which engage in a wide variety of practices, from agencies directly concerned with

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<sup>36</sup>Hahn and Stavins 1992, 464.

<sup>37</sup>Chatterjee and Finger 1993, 3. See also Sachs 1993; and Hawkins 1993.

<sup>38</sup>For an argument that a more radical reformulation of the international relations literature is required see Saurin 1996.

the planet's resources and environmental quality to those whose main focus is trade, development, or even security. Many states' foreign policies also regularly include high-profile attention to global environmental concerns and a wide range of non-state actors directly address global environmental problems and the human practices that contribute to, or ameliorate, such problems. Yet liberal environmentalism has not transformed the international system itself in ways that resemble the initial proposals put forward by the internationally focused environmental movement. Instead, the nature of global environmentalism has itself been transformed to fit better within the normative structure of international society. New ideas were indeed required to make that transformation possible, and thus to bring environmentalism into the mainstream of international relations, but those ideas interacted with an existing social structure in an evolutionary fashion.

The ultimate legacy of UNCED and liberal environmentalism are uncertain. This dissertation has not argued that liberal environmentalism has been a success in solving environmental problems or improving environmental quality. Neither has it argued that environmental policy has in fact been incorporated into economic policies everywhere to the degree promised at Rio. Indeed, as I write this, most delegates to the UNGA's special session on the fifth anniversary of the Earth Summit have just finished describing their lack of progress on achieving many of the promises made in 1992. Rather, the dissertation has made an argument about how the normative basis of international environmental governance has evolved.

In light of the limited achievements since UNCED, this analysis seems especially appropriate given that UNGA member states agreed in New York to reaffirm their commitment to Agenda 21 and all the principles in the Rio Declaration on Environment and Development.<sup>39</sup> The affirmation of the norms institutionalized at Rio suggests that these norms remain the core of international environmental governance. At the least, understanding the process behind the evolution of these norms and identifying such trends might allow a deeper critical analysis of why specific policies and programs based on that governance structure have not achieved all that was hoped for at Rio. At the most, this dissertation suggests that debates about the most appropriate such norms, and the possibilities of change, ought to be reinvigorated.

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<sup>39</sup>Environmental News Service 1997.

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### **Formal Interviews**

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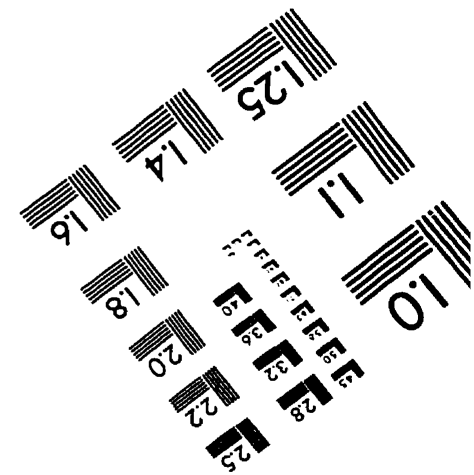
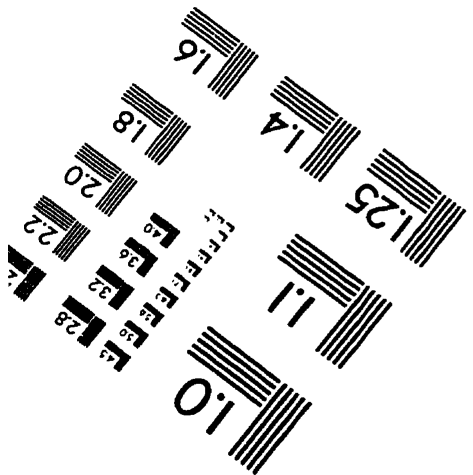
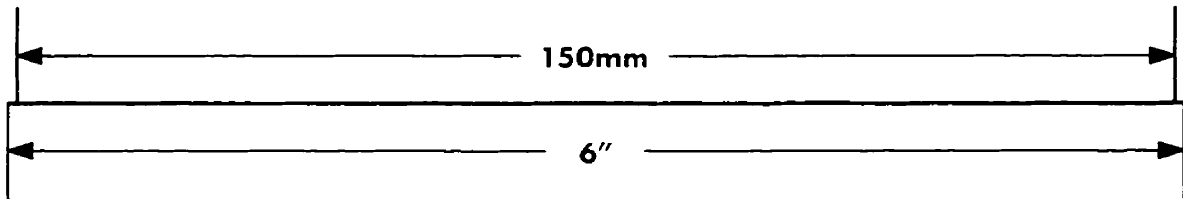
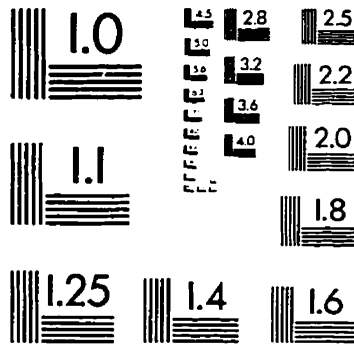
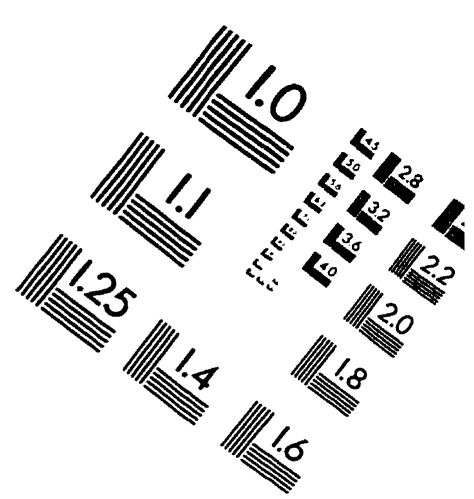
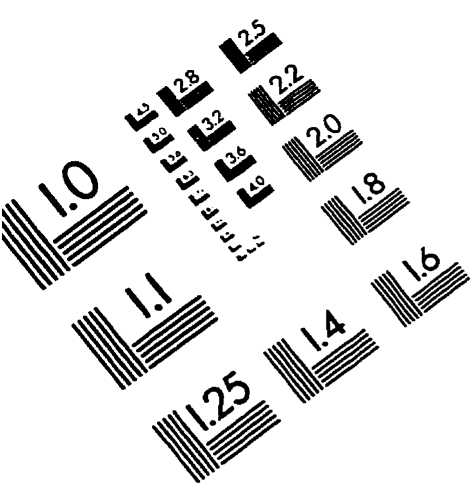
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