

International Politics and the Environment

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International Politics and the Environment

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First published 2009

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1 Oliver's Yard
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London EC1Y 1SP

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2455 Teller Road
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SAGE Publications India Pvt Ltd
B 1/1 1 Mohan Cooperative Industrial Area
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New Delhi 110 044

SAGE Publications Asia-Pacific Pte Ltd
33 Pekin Street #02-01
Far East Square
Singapore 048763

Library of Congress Control Number: 0000000

British Library Cataloguing in Publication data

A catalogue record for this book is available from
the British Library

ISBN 978-1-4129-1974-6
ISBN 978-1-4129-1975-3 (pbk)

Typeset by C&M Digitals (P) Ltd, Chennai, India
Printed in Great Britain by [to be supplied]
Printed on paper from sustainable resources

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5

NEGOTIATING SOLUTIONS TO INTERNATIONAL ENVIRONMENTAL PROBLEMS

A consensus about the existence, causes, and importance of an environmental problem does not always produce a consensus among states on whether, let alone what, international action to take. Even after an environmental change becomes a topic for international discussion, highly concerned states may fail to prompt international action. This chapter focuses on the background conditions, negotiation processes, and institutional provisions that facilitate or hinder intergovernmental regime formation. It addresses two questions central to the study of international environmental politics: regime formation and regime design (see Young and Osherenko, 1993c: vii). With respect to regime or institutional formation, when are states likely to succeed in negotiating solutions to identified problems? Why do states reach agreement on addressing some international environmental problems but not others (Hasenclever et al., 1997: 1)? Why do states address some problems promptly but others only after decades of discussion? Why have states negotiated numerous protocols and amendments to some agreements but left others unchanged? With respect to regime design, why do some agreements have more specific and stringent provisions than others? Why do some carefully monitor and sanction violations, others seek to facilitate compliance, and yet others pay little attention to compliance?

Definitions

Scholars have engaged such questions in terms of both regimes and institutions (Krasner, 1983; Keohane, 1988; Taylor and Groom, 1988), examining both their formation and their design (Young and Osherenko, 1993a; Koremenos et al., 2004). To clarify these questions, this chapter focuses on that subset of international regimes and

institutions comprised of formal intergovernmental agreements – international environmental agreements (IEAs). Countries sometimes cooperate through informal or tacit understandings without formalizing their understandings. And when states choose to cooperate through formal legal agreements, those agreements may not shape the expectations and social practices considered to define international regimes and institutions (on the regime/institution distinction, see, for example, Lipson, 1991; Keohane, 1993: 28; Hasenclever et al., 1997: 19–20). And, even when legal agreements shape expectations, they may not significantly alter behavior (Keohane, 1993: 28; Hasenclever et al., 1997: 9–10). Yet, considerable evidence exists that negotiations that eventually produce treaties, conventions, and other agreements are the likely and ‘normal’ outcome of intergovernmental efforts to resolve international environmental problems (Young and Osherenko, 1993a: 225). I use ‘regime’ and ‘institution’ interchangeably in this chapter and adopt Keohane’s definition of international agreements as ‘institutions with explicit rules, agreed upon by governments, that pertain to particular sets of issues in international relations’ (Keohane, 1989: 4). There are, of course, many alternative mechanisms by which governments, nongovernmental organizations (NGOs), and multinational corporations (MNCs) address international environmental problems.

Following the prior chapter’s structure for discussing issue emergence, this chapter categorizes the influences on intergovernmental environmental negotiations as including relatively passive ‘background conditions’ that, even if not necessary, make it possible or likely that states advocating action will succeed as well as more active ‘proximate determinants’ that more often appear as direct and immediate influences on the formation and design of intergovernmental agreements.

Background Conditions that Support International Action

Many factors create background conditions that foster international environmental negotiations. Some factors relate directly to the environmental problem at hand while others are exogenous factors that, although unrelated, facilitate or inhibit international efforts to cooperate on that problem. The former category includes the type and number of actors relevant to addressing the problem, those actors’ interests and motivations, the distribution of power among them, and the availability of an appropriate institutional forum. The latter category includes broader interdependencies among states and long-term policy trends.

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Relevant actors

To understand success in negotiating IEAs for some environmental problems but not others, start by considering which, and how many, actors are relevant to resolving a problem. Although victims and perpetrators dominate the issue emergence stage (see Chapter 4), negotiations often expand the pool of relevant actors to include a third group, potential contributors.

As discussed previously, victims are defined as those that perceive it as costly to leave a problem unaddressed or as beneficial to address it. States materially harmed by environmental degradation are, to be sure, more likely to consider themselves victims than those that are not. Yet, some states that *are* materially affected may not view those effects as negative – or as sufficiently negative to require their resolution. Both political rhetoric and scholarly analyses identify most problems as Tragedies of the Commons, implying that all states are victims and would benefit from the problem's resolution. Yet often this is not the case. Thus, concerns about deforestation are not shared by some governments that view logging as an engine for economic growth rather than an environmental problem. And, states that are *not* materially affected by some environmental degradation may nonetheless perceive themselves as victims. Many non-whaling, and even non-ocean-bordering, states are active members of the International Convention for the Regulation of Whaling (ICRW). Negotiations commence only after at least some states perceive themselves as victims and international action as warranted.

Perpetrators are those whose actions – or inactions – contribute to causing an international environmental problem. Some problems involve few actors whose actions unambiguously cause a problem, for example, nuclear weapons testing or nuclear weapons waste disposal. Some involve many actors whose actions can be clearly identified as causing the problem, including many types of marine, atmospheric, or freshwater pollution. Some impacts can be attributed to specific states' or individuals' actions, such as oil or chemical spills and other accidents, while others are the aggregate result of individual actions, such as overfishing or climate change. In these latter cases, causal responsibility can be shared relatively equally among states or can be dominated by a few states. And which states are considered responsible reflects competing efforts at framing designed to blame certain actors and not others (Stone, 1989).

Efforts to resolve a problem may involve identifying potential contributors who are neither perpetrators nor victims. Resolving environmental problems does not always require restricting the activities that cause it. Environmentally-harmful activities can

continue or even increase if technological or behavioral strategies for offsetting impacts can be developed. Such strategies may engage actors who are not responsible for the problem but see attractive economic opportunities in resolving it. 'Green technology' companies recognize that international regulation can create new markets and stimulate existing ones. Thus, climate change negotiations have bolstered various efforts to develop solar and wind energy as well as hybrid vehicles, have revived the prospects for nuclear energy, and have fostered research into carbon sequestration technologies. Resolving some environmental problems can generate non-environmental benefits, as when the international protection of reefs, wetlands, or forests promotes eco-tourism. And, actors may self-consciously devise linkages between environmental progress and economic benefits, as in debt-for-nature swaps. In all these cases, actors who are neither perpetrators nor victims may have incentives that make them willing to contribute to resolving a problem.

For any problem, the number of victims, perpetrators and potential contributors who must be engaged affects the ease of negotiating international agreements. International negotiations depend on concerned states and non-state actors convincing other states to perceive themselves as victims and crafting an agreement that can induce enough, even if not all, perpetrators and/or potential contributors to take enough action that an agreement is worth having. The number of actors who must be engaged to address a problem to the satisfaction of concerned states influences the ease with which a problem can be resolved (Koremenos et al., 2001). Generally, the more countries that must be 'at the table', the more difficult and time-consuming it will be to reach agreement, since more interests must be integrated into that agreement's terms (Young and Osherenko, 1993b: 12; Koremenos et al., 2001). That said, regional agreements with 30 to 40 governments and global agreements with over 100 countries are not uncommon and bilateral negotiations sometimes fail to produce an agreement (Young and Osherenko, 1993b: 12).

Interests and motivation

States' interests are major influences on regime formation and design. Scholars have proposed various typologies of interest configurations and conflict types to explain the chances for success of international negotiations (Young, 1998, 1999a; Miles et al., 2002).

Scholars often argue that negotiations succeed only if the relevant states 'share common interests which they can realize only through cooperation' (Hasenclever et al., 1997: 30). Such a view obscures, however, that 'common interests' are not necessarily an inherent and

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fixed trait of a problem but, as often, reflect the efforts of concerned states and other actors to convince states to become concerned or to alter their behavior even if they remain indifferent to the problem. To be sure, when environmental problems reflect Tragedy of the Commons situations or arise from incapacity, concerned states accept the environmental problem and the need for action. But even in many Tragedy of the Commons cases, some states reject the view of concerned states that a problem requires action. States can more easily – and hence are more likely to – resolve Tragedy of the Commons cases than upstream/downstream problems if only because, in the latter case, the perpetrators of a problem can reject the notion that a problem exists. Thus, consider two countries that pollute and take water from both a transborder lake and a transborder river. Although both countries have incentives to negotiate to reduce lake pollution, the upstream state has no incentive to negotiate to reduce river pollution (Hasenclever et al., 1997: 53).

A necessary condition for successful environmental negotiation is one state having sufficient concern that it seeks to cooperate with others to address it. If no state views – or is convinced by non-state actors to view – environmental degradation from some human activity as warranting resolution, then international negotiations will not commence. Although only one concerned state is needed, IEA formation becomes more likely as the fraction of relevant actors increases. Before negotiations can begin, various state and non-state actors must try to generate concern among initially indifferent states. This can involve scientific or interest-based arguments that clarify the effects and implications of the environmental problem, as exemplified by the Intergovernmental Panel on Climate Change (IPCC) reports or in early LRTAP scientific efforts (see Levy, 1993). But it can also involve value-based arguments, as was evident in the success of concerned governments and NGOs in garnering support for the adoption and continuation of a commercial whaling moratorium within the ICRW based on the notion that whaling is no longer an ‘appropriate’ form of the exploitation of natural resources. Regardless of the process involved, increasing the number of states that view themselves as ‘victims’ increases the likelihood that an IEA will form.

The magnitude of international concern, rather than the number of concerned states, may better predict the prospects for IEA formation. The notion of ‘magnitude’ captures the idea that what matters is the number of concerned states as well as the strength of each state’s concern. A few states, or even a single state, when strongly concerned about a problem may have the motivation and resources to generate concern among many other states. And even if they fail to generate sincere concern, strongly motivated states

may be willing to expend resources and make linkages with other issues that induce states that remain unconcerned about an environmental problem to negotiate for instrumental reasons.

A state's level of concern depends on its view of the costs and benefits of addressing a problem compared to those of not addressing it. State positions in environmental negotiations depend on their ecological vulnerability and the abatement costs they would face under proposed rules (Sprinz and Vahtoranta, 1994). States with high ecological vulnerability and low abatement costs will be 'pushers', leading negotiation efforts. Those with low ecological vulnerability and high abatement costs will be 'draggers' or 'lag-gards', resisting international efforts. States with high ecological vulnerability but high abatement costs will be 'intermediates', supporting international agreement but negotiating to minimize the costs they will bear. And states with low ecological vulnerability and low abatement costs will be 'bystanders', being indifferent to whether such an agreement is negotiated.

If such underlying incentives influence states' negotiation positions, those positions also reflect policy styles, party politics, bureaucratic structures, industrial interests, NGO influence, and transnational linkages (Schreurs, 1997; DeSombre, 2000; O'Neill, 2000). Under certain conditions, these forces can lead states to enter negotiations looking for integrative solutions and to compromise to address a problem. Indeed, negotiations appear to succeed 'only when integrative bargaining or a search for mutually beneficial solutions assumes a prominent role in the process' (Young and Osherenko, 1993b: 13). Negotiation success does not depend on a problem being a high priority for relevant states: a low priority may allow states to avoid fractious politicization by treating negotiations as 'technocratic' issues (Young and Osherenko, 1993a: 15). Nor does negotiation success depend on states acting altruistically (Young and Osherenko, 1993b: 16). The predictable self-interest-seeking negotiating positions of states do not preclude them from identifying solutions that will meet the needs of all self-interested parties.

Power

As in most of international relations, power influences whether pushers succeed in establishing an IEA. International treaties are voluntary contracts among sovereign states. States cannot be forced to participate in negotiations or join IEAs once they are formed. They must be convinced that it is in their interests to do so. International negotiations consist of those who would benefit most from resolving a problem attempting to raise concern and to craft agreement terms so that those who can contribute most to resolving

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the problem will either view it as in their interests – or can be convinced by other means – to participate.

The interaction of power with interests becomes evident by considering two extreme cases. In one, a single state experiences considerable immediate and tangible costs from some form of environmental degradation. In the other, a single state that is a major source of the environmental problem would face significant costs to reduce their contribution to the problem and would benefit little from the problem's resolution. Clearly, the former would be a pusher and the latter a dragger. But to know whether an IEA is likely to form requires that we also know how much power these states have. Pusher states that are powerful – in the sense of controlling various resources capable of influencing other states – can use their resources to induce draggers to negotiate and can also design institutional provisions to make participation rewarding and non-participation costly. If pusher states lack such resources, they will have fewer ways of engaging perpetrating states. Likewise, powerful dragger states can more readily resist, delay, or simply ignore calls from less powerful states to alter their environmentally-harmful behaviors.

Structural power – as embodied in military hardware and economic prowess – surely matters in international environmental affairs. IEAs are more likely to emerge when five members of the G-8 are pushers than when five developing states are. Yet structural power provides less explanatory leverage than realists might have us believe (Zürn, 1998: 625). The general unwillingness of states to deploy military or even significant economic resources to pressure others on environmental issues means that structurally powerful pusher states usually rely on persuasion more than coercion and that structurally weaker dragger states can and will resist such pressures if doing so would be viewed as bowing to external pressure or if more powerful states fail to offer attractive incentives to forego the activities in question. Issue-specific power (a state's ability to influence outcomes if no agreement is reached and their voting and bargaining power within international environmental institutions) gives states considerable power over what gets done, when, and how. Brazil can effectively block progress to protect tropical rainforests just as Botswana, Namibia, and Zimbabwe can to protect elephants.

American opposition to the Kyoto Protocol after 2000 illustrates that IEAs can develop despite the opposition of powerful states. Yet powerful states, in particular the USA, have used their power to induce recalcitrant states to take environmental concerns seriously, influencing the timing and content – and membership – of several international environmental regimes (Young and Osherenko, 1993a: 230; DeSombre, 2000). And, while American

unilateralism drew initial international attention to the ozone protection issue, China and India later used the power of 'their growing demand for CFCs' to resist pressures to participate until industrialized countries amended the Montreal Protocol to cover their costs of compliance (Young and Osherenko, 1993a: 231; Gruber, 2000).

Science

Science has received particular attention as a force promoting international environmental cooperation. Although expertise is crucial to the negotiation of arms control, trade, and human rights treaties, scientific expertise wields greater influence in environmental negotiations because of science's central role in understanding the magnitude, causes, and solutions to environmental questions. As with the need for concern in at least one country, scientific evidence *suggesting* that humans are contributing to some form of environmental degradation is a necessary condition for negotiations to commence. Cooperation becomes easier 'to achieve once a common or widely shared (though not necessarily accurate) understanding of the problem, its causes, and its solutions arises' (Young and Osherenko, 1993b: 19). When knowledge is uncertain but inaction threatens high costs, policy-makers may turn to scientists in 'epistemic communities' to help them identify the nature of the problem and whether, when, and what type of action to take (Haas, 1992a: 188 and 215, 1992b; Young and Osherenko, 1993b: 20). Epistemic communities concerned about an environmental problem can be particularly influential – even without strong public awareness or concern – if their attempts to foster international policy do not engender strong interest-based opposition. Thus, scientists convinced governments to negotiate and adopt the Convention on Wetlands of International Importance (Wetlands Convention) in 1971, long before the development of public concern about wetland loss (Matthews, 1993).

States often grant scientific arguments more legitimacy in negotiations than interest-based arguments and, hence, can prove quite influential (Jasanoff, 1990, 2004; Young and Osherenko, 1993b: 16). Scientists' methods and rules of discursive legitimacy provide an alternative to typical interest-based and power-based bargaining. In environmental negotiations, informal norms generate expectations that states should support their positions with empirical evidence and scientific research. Indeed, the international whaling regime and many other IEAs require that protocols and amendments 'be based on scientific findings' (International Convention for the Regulation of Whaling, Art.V.2.b). Scientific evidence need not be

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overwhelming, non-controversial, or even widely accepted to have influence. Governments sometimes act before scientific knowledge fully consolidates. Various states negotiated the 1985 Vienna Convention for the Protection of the Ozone Layer before the most compelling evidence identified CFCs as the source of ozone depletion; 'the real decisions' underlying the 1987 Montreal Protocol were made before a scientific consensus emerged (Haas, 1992a: 224). In other cases, public concern develops despite scientific uncertainty. When governments commence negotiations in such settings, scientific findings that magnify a problem or identify cheaper ways to address it can foster international agreement by altering states' calculations of their ecological vulnerability or abatement costs while contrary findings can reduce pressure for agreement.

However, scientific arguments can also be ignored, obscured, or manipulated in the service of interest-based positions (Young and Osherenko, 1993a: 233). International fisheries agreements routinely ignore or override the recommendations of their own scientific advisory bodies (Walsh, 2004). And although scientific norms and training usually lead scientists to resist pressure from governments or others to generate science to fit policy positions, unconscious and implicit biases can influence the questions asked, the interpretation of results, the communication of uncertainty, the options considered, and the policy conclusions offered. Indeed, values and power that are embedded in scientific information can rationalize or reinforce rather than reduce political conflict (Jasanoff, 1990; Litfin, 1994: 186). And even if scientific research could be made objective and impartial, policy-makers could still selectively use or ignore science to support interest-based positions.

Institutional forums

States expend time, take risks, and incur costs to create international institutions. Therefore, having a pre-existing institution in which to negotiate can facilitate IEA creation (Keohane, 1984). For bilateral problems or those involving only a few states, the 'institution' may consist simply of interactions between a few government representatives who document their agreements in an 'exchange of notes' or 'exchange of letters'. When more states are involved, a more formal negotiating forum is usually established. In new areas of international environmental cooperation, such forums are often created by a particularly concerned government hosting a conference and inviting relevant countries. At such initial meetings, states engage in 'constitutional' negotiations over the rules for subsequent substantive negotiations including whether to make decisions by unanimity, consensus, or qualified majorities. Over time, meta-norms for international

environmental negotiations have developed, with those rules being understood and accepted by all participants and modified, if needed, to fit the vagaries of the specific context.

In many areas of international environmental law there are decades of negotiating experience and many pre-existing forums for negotiation. Many international environmental institutions hold regular meetings to review progress under existing agreements, to discuss proposed revisions, or to negotiate new ones. Such regular meetings can foster negotiations by providing both a ready-made discussion forum and a foundation for mutual knowledge, understanding, and trust among the negotiators. Most fishery commissions meet annually to adopt catch quotas. The regular meetings of the Marine Environment Protection Committee of the International Maritime Organization and of the Alpine and LRTAP Conventions have fostered adoption of numerous conventions, protocols, and amendments, many that are far afield from the initial topics of negotiation. The Convention on the Conservation of Migratory Species of Wild Animals (CMS) encourages member states to conclude additional agreements. UNEP provides a forum for negotiation on regional seas issues and the European Union provides a forum for European environmental issues. Such forums remove the mundane but important obstacle to resolving a problem, namely, having an established place and time to talk about it. And they also have bureaucratic incentives to avoid 'going out of business', leading them to promote new areas for negotiation once existing ones have been addressed. They also place states reluctant to take action on an issue in the awkward position of either discussing the problem or actively, and publicly, opposing its discussion. Thus, such institutions favor the interests of those states seeking to have an environmental problem recognized and addressed. Indeed, the availability of institutional forums explains why problems in some environmental sectors are more readily resolved than in others. It seems hard to imagine that as many conventions, protocols, and amendments addressing marine pollution and fisheries would have been negotiated in the absence of ongoing institutions in which to negotiate them.

Long-term interdependencies

Environmental negotiations are more likely to succeed when states – and among those states that – interact frequently, have a dense set of interactions, have generally cooperative relationships, and have issue-specific power resources that foster interdependence (Keohane and Nye, 1989; Hasenclever et al., 1997: 54–5). Interdependence strengthens incentives to cooperate and provides more opportunities for each state to know that other states may be watching their

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environmental behaviors and that those behaviors may influence, implicitly or explicitly, their ability to cooperate in other, more important, arenas. Upstream or upwind states may find that downstream or downwind states raise pollution issues in economic or other forums. Thus, the dense interdependence among European states helps explain the greater number and range of IEAs in Europe than in other regions. More direct interdependencies between environmental and other issues can enhance international cooperation, as was evident in the negotiation of the North American Agreement on Environmental Cooperation as part of the North American Free Trade Agreement negotiations.

Trends in environmental concern

Long-term trends in environmental concern also play a role. The prospects for negotiating an IEA have increased as environmental concern has grown. Thus, the rate of one IEA per year before the Second World War became 10 per year in the 1960s and 20 per year in the 1990s (Mitchell, 2003). Beyond such long-term trends, negotiations can be fostered or inhibited by more short-term changes in the international setting: 'Larger national and world events which, though far removed from the subject matter involved in specific cases of regime formation, can and do significantly affect both the timing and content of regime formation' (Young and Osherenko, 1993b: 20-1). The importance of the environment relative to other concerns can mean the difference between the successful conclusion of negotiations or delay, continuation, or termination. Thus, the negotiations regarding Svalbard Island were interrupted by the First World War, but were taken up by 'the Paris Peace Conference ... even though the question of Svalbard had not figured in any way in the war' (Young and Osherenko, 1993a: 255). Likewise the international regulation of whaling, institutionalized in agreements in 1931 and 1937, was interrupted by the Second World War but recommenced directly thereafter. The end of the Cold War allowed environmental issues to move up many states' (including the superpowers') lists of international priorities while the events of 11 September 2001 pushed environmental concerns down those same lists.

Processes of International Negotiation

As with most realms of international relations, outcomes reflect both structure and agency. Structural forces like interests, power,

institutional forums, and interdependencies may promote or inhibit, but do not determine, negotiation success. Within structural constraints, actors' choices can have a significant influence on whether an IEA forms, when it forms, and what form it takes.

Much scholarship has highlighted the influence of states, epistemic communities, NGOs, domestic political constituencies, and individuals (Young, 1991; Haas, 1992b: 18; Raustiala, 1997a; Betsill and Corell, 2001; Corell and Betsill, 2001). The influence of such actors is best understood in terms of how well they perform certain functions that foster or inhibit IEA formation. However 'ripe' structural conditions may be for agreement, reaching such agreement depends on the efforts and skill of various actors in performing certain tasks (Zartman, 1985).

Background on negotiation processes

Intergovernmental negotiations can proceed in various ways but do tend to have common features. First and foremost they are negotiations among governments, with negotiations conducted by executive branch officials. In high-visibility multilateral negotiations, large developed countries may send national delegations consisting of more than 50 people, including executive branch political appointees and staff as well as experts and advisors from the national legislature, academic institutions, or NGOs. Small developing countries, on the other hand, may be represented by a foreign national negotiating on behalf of several countries or may not be represented at all. Negotiation rules usually allow only government representatives to speak during negotiating sessions, with others allowed to speak only if invited. Some negotiating forums grant NGOs – whether representing scientific, economic, or environmental interests – observer status that allows their representatives to attend some or all negotiating sessions. Although much early international environmental diplomacy was conducted with scant public attention, environmental negotiations now receive significant attention from NGOs and the international media. As negotiations have become more multilateral, public, and complex, much of the 'real action' has moved out of the formal sessions into smaller 'working groups'. These working groups can draft particular provisions and include negotiators from a subset of countries considered representative of, or sensitive to, the interests of all relevant states. The exclusion of lobbyists from negotiation and working-group sessions does not preclude lobbying, of course. Conference hallways, local restaurants, and hotel lobbies have become places where government representatives seek input from scientists, NGOs, and business interests and where the latter lobby the former to propose particular treaty language or to support, reject, or change proposals made by others.

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Precisely because all governments can object to specific provisions or reject, in toto, any agreement arrived at, negotiations 'normally operate under consensus rather than majoritarian rules' (Young and Osherenko, 1993a: 227). This generates dynamics that combine efforts to find collectively acceptable – and sometimes 'least ambitious program' (Underdal, 1980) – provisions that address all states' interests, to persuade other governments to reassess their initial position, to engage in log-rolling and linkage, to make otherwise-unacceptable provisions acceptable, and to use pressure tactics and side-payments. International negotiations can also reflect the tension between the integrative bargaining needed to get agreement from other governments and the distributional bargaining needed to meet the interests of one's own government (Raiffa, 1982).

Continuing to build knowledge, concern, and urgency

The fostering of knowledge, concern, and urgency that is central to getting environmental problems on the international agenda does not end once negotiations start. Activist NGOs and leader states must continue their efforts to get more states to the table, to transform reluctant states into leaders, and to get leader states to take more aggressive positions. Improved understanding by negotiators of environmental problems and their causes – whether requested from or provided by scientists and NGOs – can foster negotiations by leading states to revise their estimates of the costs of reaching, or failing to reach, agreement. Global environmental assessments (evaluations of the status, trends, causes, and impacts of an environmental problem undertaken by international groups of government and independent scientists) especially when picked up by the media, can increase pressures on negotiators. Findings from groups like the IPCC can be quite influential with those governments that view them as credible (scientifically 'accurate'), salient (relevant to current decisions), and legitimate (reflective of their interests and perspectives) (Mitchell et al., 2006b).

Before negotiations can start, interest groups must make constituencies aware of a problem, mobilize pressure on governments, and make taking action seem urgent. Once negotiations do start, environmental NGOs and corporate actors provide conduits that can keep constituencies informed about negotiation progress and negotiators informed about constituency preferences (Lipschutz and Conca, 1993; Princen and Finger, 1994: 217; Lipschutz and Mayer, 1996; Wapner, 1996). Scientists, corporate representatives, and environmental activists also can 'infiltrate' governance, joining national delegations or

working directly with the bureaucracies of international organizations (Haas, 1992b: 27; Raustiala, 1997b: 730). These dynamics matter because, while interest groups try to influence negotiators' views on ecological vulnerability and abatement costs, they also try to convince them that, regardless of such vulnerabilities and costs, the political costs of opposing a group's views are greater than those of adopting its position.

Generating mutually acceptable goals and policies

Once governments have 'come to the table' (Stein, 1989), they shift their attention to defining mutually acceptable goals and to identifying policies for achieving those goals. Although states must already share an understanding of an environmental problem to start negotiations, to reach agreement they must create a shared understanding of the appropriate solution to it, despite their varying levels of concerns and their often competing interests. Even before a range of policies – and their corresponding costs and risks – has been specified, differing levels of state concern will generate differing views of what and how much should be done.

The first several paragraphs (or preamble) of most IEAs usually lay out the problem at hand and a mutually acceptable, if not always shared, vision of the goal of resolving the problem. Preambles are often laundry lists of varied – and sometimes contradictory – goals that reflect, without resolving, the different interests, perceptions, values, and objectives of the states involved. Thus, the 1992 Convention on Biological Diversity's (CBD) preamble links protecting biological diversity to its intrinsic value and value in maintaining Earth's 'life sustaining systems', to states' 'sovereign rights over their own biological resources', to precautionary approaches and technology transfer, to the concerns of indigenous communities and women, to economic development and 'poverty eradication', and to meeting human food and health needs. Such language in IEA preambles illustrates that states can reach agreement through two different processes: compromises and 'horse-trading'. In the former, states reach agreement by identifying a middle ground among their positions that, at its best, resolves contradictions in those positions to the satisfaction of all parties. In the latter, states reach agreement by combining their positions in ways that, at the extreme, merely 'paper over their differences' (Mitchell, 2005: 205). States make international policy either through compromise or by 'avoiding making decisions when none of the participants in the deliberations is willing to compromise' (Mitchell, 2005: 205).

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Even when states share a motivation to take collective action and develop a consistent vision of the goals of such action, significant obstacles may arise with respect to what actions to take. Agreement on the need for action need not imply agreement on many institutional design elements, including how much action to take, how quickly, by which actors, and with which actors bearing the costs. Environmental problems that require ongoing management rather than one-shot solutions (see below) may generate significant disagreement over decision making procedures (like voting) that will be used in revising institutional rules. What pollutants are banned and which restricted, what species are listed as endangered and which merely as threatened, or when and how fish stocks are protected can all become crucial aspects of negotiations that can then become deal-breakers. When environmental protection entrains high economic costs, transparency about the actions of all relevant states and sub-state actors may become crucial and devising acceptable inspection procedures may slow or prevent agreement.

Negotiation progress is fostered by 'deft diplomacy' that involves the ability to 'add and subtract issues to facilitate the bargaining process, craft the terms of negotiating texts, and broker the deals needed to achieve consensus' (Young, 1998: 23; see also Sebenius, 1983). Although material resources are helpful, diplomats, bureaucrats, or NGO and corporate representatives can often facilitate agreement without them (Young, 1998: 23). Good diplomacy often entails getting states with competing positions to focus on the underlying interests they seek to promote through the negotiations, thereby shifting from positional, distributive, or zero-sum bargaining to interest-based, integrative, or win-win bargaining (Fisher and Ury, 1981). The former tends to produce failed negotiations or agreements that incorporate suboptimal compromises, whereas the latter, though harder to achieve, tends to produce agreements that simultaneously address the concerns and interests of all relevant actors (Fisher and Ury, 1981: 5). Integrative bargaining also increases the support of participating states for an agreement and – because it reflects and meets those interests – makes it more likely that they will find it in their self-interest to fulfill their treaty obligations (Humphreys, 2001: 125).

Negotiation success involves not merely identifying a zone of possible agreement (the intersection among the pre-existing interests of the states involved) but also in convincing states to clarify and/or re-evaluate their interests (Raiffa, 1982). When states rely on distributive bargaining or efforts at integrative bargaining fail to identify mutually acceptable solutions, negotiations may fail altogether or

produce 'least ambitious program' solutions in which countries agree to do little more than what they would have done anyway (Underdal, 1980; Hovi and Sprinz, 2006).

Assuming that bargaining generates mutually acceptable – if not the best possible – provisions, a second phase of building support for the negotiated agreement commences. Countries that have accepted existing terms must be prevented from re-opening provisions for negotiation and other countries must be convinced to accept existing agreement terms without adding or changing provisions that would make the agreement unacceptable to existing supporters. Joint agreement on a treaty text does not preclude states from reverting to distributive bargaining strategies designed to improve the benefits they receive from the agreement even if this is at the expense of other parties. And consensus among those states most active in negotiations must be broadened to those that may have had less say in designing certain provisions but are still crucial to the final success of the negotiations. Those seeking to foster IEA formation must convince all relevant states – mutually and simultaneously – to accept the agreement's current terms rather than to continue negotiating for better terms or to walk out of the negotiations (Ikle, 1964: 59–60).

The willingness of states to accept the set of provisions that constitute an international treaty also reflects what Putnam calls 'two-level games' (Putnam, 1988). Negotiations among governments are conducted in a context in which each government's representative recognizes that they must find positions that are simultaneously acceptable to other governments and to their own domestic constituencies. NGOs and the media can serve as communication channels by which negotiators learn about the preferences of their constituencies and those constituencies learn about the proposals and likely actions (or inaction) of their governments, with negotiations involving a process in which governments may 'discover' their interests as much as they attempt to further those interests.

Discourse, framing, and negotiation dynamics

Negotiations involve both rationalist elements in which 'identifiable and fixed' preferences are inputs to the process and constructivist elements in which preferences develop during and through the process, leading to outcomes that may differ significantly from what any participant would have predicted at the outset (Zürn, 1998: 627). The inability of those involved, let alone others, to predict negotiation outcomes highlights the influence of the process on those outcomes.

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Often states have 'well-developed conceptions of their own interests' with respect to an environmental problem (in terms of ecological vulnerability, abatement costs, etc.) that they bring to, and maintain during, negotiations (Young, 1998: 97). And in such cases, states attempt, offensively, to promote their interests through institutional design and, defensively, to protect their interests from institutional encroachment. However, international environmental negotiations are not merely venues for governments to lay out their positions to determine if an area of agreement exists or to bully or entice others to accept their positions. Negotiations include such dynamics but can also include 'communicative action' in which governments attempt to argue and persuade and, to varying degrees, are open to the arguments and persuasion of others (Risse, 2000).

States' interests and preferences tend to be less clear and less stable when issues are complex, knowledge is uncertain, and material interests are 'weakly or ambiguously affected', features that are typical of many environmental problems (Stokke, 1998: 132-3; Zürn, 1998: 629-30). States may have insufficient information to know what is in their own interests and, even if they do, may not know which of various possible agreements would best promote those interests. Mutual agreement is created not by formulaically mapping the intersection of states' pre-existing interests but through a dynamic process in which negotiators initially 'focus on a few key issues and then ... [develop] a negotiating text setting forth proposed provisions relating to these issues' (Young and Osherenko, 1993b: 12). States do not just restate their positions but listen to the arguments of and respond to proposals from other states, non-state actors, or individuals, looking for creative, integrative solutions that promote their interests *and* those of others.

Long-term trends in the scientific framing of environmental issues and international political and legal norms influence what problems negotiations attempt to address and what types of solutions agreements create. On the scientific side, IEAs in the early twentieth century were primarily bilateral and regional efforts to protect individual species as natural resources to facilitate continued human harvest, while agreements today address a much wider array of issues including pollution and habitat degradation, adopt a much more ecosystemic approach, and are often global in character (Mitchell, 2003). Modern environmental treaties often reference non-environmental issues, such as economic development and the rights of women and indigenous communities. IEAs also reflect legal norms and precedents. Negotiators do not create agreements from 'scratch' but look instead to prior agreements for both general strategies and specific provisions. At a broad level, successful prior institutions have provided

models – for example, framework-protocol approaches or calls for the use of precautionary measures – that have become increasingly common in environmental treaties (List and Rittberger, 1998: 70–1). At a narrower level, the non-substantive parts of agreements including amendment, entry into force, and withdrawal clauses are often treated as boilerplate, reading almost identically across a wide range of agreements (Depledge, 2000).

Maintaining momentum and prompting action

Precisely because of the complexity of addressing many environmental problems, negotiations are fostered by actors committed to successful conclusion of the negotiations rather than to ensuring that a particular nation's interests are furthered by an agreement. Representatives of international organizations such as UNEP, of particular states, or of NGOs often take actions that are designed simply to maintain momentum. Obstacles to agreement always arise. Conferences end before agreement is reached. External events may focus policy-makers on other issues. When such forces make reaching agreement more difficult or less urgent, maintaining 'political momentum' becomes crucial (Young, 1998: 87–8). NGOs, for example, can mobilize international opinion when agreements are nearing completion or require ratification. Entrepreneurial leaders will often prepare proposals in advance, waiting for the political conditions to ripen, as was evident in UNEP executive director Mostafa Tolba's proposals on ozone negotiations (Keohane, 1996: 26; Young, 1998: 119).

External events also can increase the prospects for success (Young and Osherenko, 1993b: 14; Hasenclever et al., 1997: 54–5). Large-scale conferences or agreements in one arena can spark interest in negotiating other IEAs. The 1972 UN Conference on the Human Environment and the 1992 UN Conference on Environment and Development reflected existing environmental concern but also reinforced and heightened that concern, with governments signing several agreements at, and subsequent to, both conferences. Governments may favor continuing to negotiate on a problem until new scientific evidence or increased public pressure makes reaching agreement a more attractive strategy (Young and Osherenko, 1993b: 15). Focusing events can put environmental problems on the international stage (see Chapter 4) but also can foster agreement after negotiations have begun. Especially when dramatic environmental problems affect powerful countries, they can 'engender a sense of urgency that spurs quick action to conclude international

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agreements' (Young and Osherenko, 1993b: 15). Focusing events cannot generate agreement out of thin air but, if negotiations have made enough progress, such events can generate domestic political pressures that may lead a range of governments to accept agreement terms that were previously unacceptable or to negotiate more flexibly. However, focusing events are not necessary for negotiation success; IEAs are often signed through the mundane but sustained efforts of committed countries and negotiators finding agreements that meet all the relevant countries' interests.

The role of leadership

All the foregoing dynamics, in turn, are fostered by actors who provide leadership. In trying to move negotiations along, leaders use various resources to increase knowledge, raise concern, design provisions, or maintain momentum. Structural leaders use material power, entrepreneurial leaders use negotiating skill, and intellectual leaders use ideas to resolve conflicts and disagreements in ways that relevant actors are willing to accept (Young, 1991). Negotiations often succeed only 'when effective leadership emerges' (Young and Osherenko, 1993a: 233). Though it may be difficult to identify independently and beforehand what leadership is, certain traits seem to promote negotiation success. Structural leadership often plays an important role in negotiations, when powerful states want agreement to be reached and are willing to expend resources to get otherwise-reluctant actors to come to the negotiating table and to accept agreement terms (Hasenclever et al., 1997: 77). For example, the United States has used its economic and diplomatic power to get both reluctant states to participate in environmental negotiations and already participating states to accept regulatory proposals that they might otherwise have found unattractive (Barkin and DeSombre, 2000; DeSombre, 2000).

Intellectual leadership also can foster international environmental negotiations (Young, 1991). Diplomats skilled at introducing new ideas, re-framing existing ideas, or shaping the discursive context can facilitate agreement by identifying realms of common interests or by getting actors to reevaluate their interests and positions.

Entrepreneurial leaders can use their personality, personal credibility, political capital, and material resources to convince various actors to accept the current terms of an agreement as, if not the best possible terms, at least the best that are likely to be available. The leaders or foreign ministers of individual countries, the heads of UNEP, and the Secretary-Generals of many international environmental secretariats have dedicated their time, resources, and reputations to

keeping such negotiations going and bringing them to fruition. Individuals can become 'determined champions' who promote certain proposals and stage focusing events to prompt action at crucial junctures (Haas, 1992a: 222; Young and Osherenko, 1993b; Young, 1998). By creating a conducive negotiating forum and having a draft text 'ready to go', entrepreneurs can take advantage of the 'policy windows' that open up when focusing events occur (Kingdon, 1995: 165).

Influences on Institutional Content

The previous section outlined factors that influence whether an IEA *forms*. This section outlines factors that influence their *content*. IEAs vary in choices as fundamental as the specificity and ambitiousness of requirements to those as mundane as official languages and which country or organization will be the depository for official documents. The theoretical and empirical foundation for explaining institutional variation, although weak, sheds light on why some institutions contain certain features and others do not.

Fundamental institutional form

IEAs vary in their fundamental institutional form. Young classifies IEAs as regulatory, programmatic, procedural, or generative (Young, 1999b). Regulatory institutions proscribe or prescribe actions; procedural institutions establish procedures for regular collective decision making; programmatic institutions allow states to 'pool resources' for projects that would not be undertaken unilaterally; and generative institutions create new and 'distinctive social practices' (Young, 1999b: 28–31). These categories are ideal types, with some real-world institutions fitting neatly into these categories while others include elements from each. Various aspects of problem structure (see Chapter 2) make the choice of one or another of these alternatives more likely.

Generative institutions reflect efforts by 'a community or a collection of groups that join forces ... to promote a particular set of activities ... [by] structuring the way parties think about problems' (Young, 1999b: 40–1). Not surprisingly, then, such institutions are common during the early stages of an international environmental problem's lifecycle when the definition of the problem is still in a state of flux. Indeed, they are most common during the issue emergence stage discussed in the previous chapter (and therefore they receive little further discussion here).

Programmatic institutions tend to appear when states want to foster scientific progress on problems that are poorly understood

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or that few countries have developed plans to address. Collaborative research efforts can generate more and higher quality data, monitoring, analysis, and insights that can produce a more complete picture of complex environmental problems than any country can generate alone. LRTAP's protocol for a program to monitor and evaluate air pollution in Europe (known as EMEP), for example, standardized and expanded environmental monitoring and sped up cooperative research that produced Europe-wide models of the sources and recipients of acid rain precursors. States tend to develop such scientific programs early on in an environmental issue's lifecycle to reduce uncertainty about the magnitude and trajectory of an environmental problem, its causes and impacts, and the availability and effectiveness of potential solutions. Such institutions may also serve the more cynical purpose of 'buying time', allowing states to quell demands to 'do something' with research rather than action. States may also pool resources into programmatic institutions to provide both incentives and resources for states to undertake local environmental remediation. The Global Environment Facility provides one example, with states contributing resources to carefully screened projects that facilitate environmental improvements that developing country governments would not take without such assistance (Sharma, 1996; Young, Z. 1999).

Among environmental problems that are well understood and on which states are ready to take action, regulatory and procedural institutions predominate. Reading IEA texts clarifies the distinction between these two institutional forms. Regulatory IEAs specify behavioral proscriptions and prescriptions while procedural IEAs create organizations to negotiate such proscriptions and prescriptions in the future. Thus, the Kyoto Protocol and the Montreal Protocol required certain member states to reduce their emissions of greenhouse gases and ozone-depleting substances by certain dates. What makes these and similar institutions regulatory is not whether the treaty language requires or merely encourages certain behaviors but the fact that they specify the behaviors that states are expected to take. By contrast, the texts of procedural IEAs include no rules on behaviors that states must avoid or undertake but instead delineate the institutional structures by which member countries can generate such rules. Fisheries treaties rarely explicitly ban or restrict fishing but, instead, identify a mandate and tasks for decision making institutions including such things as the frequency, representation, and voting rules for meetings. The 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), like many IEAs, blends these strategies, specifying sets of rules that states must follow to protect species

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facing different levels of endangerment and appendices of species to which each set of rules apply while also creating a Conference of the Parties to allow for the regular revision of those appendices.

Both regulatory and procedural institutions usually emerge when states agree that a problem warrants resolution. States tend to prefer procedural to regulatory institutions in three situations: when the problem requires management rather than resolution, when scientific uncertainty is high, and when political will is low. First, environmental problems differ in whether they can be solved or only managed, with states tending to create regulatory institutions for the former and procedural institutions for the latter. The nature of some problems allows states to establish one-time, static rules which, if followed, would address the problem to the satisfaction of the states involved – those rules require revisiting only if states become more (or less) ambitious in their desire to resolve the problem. States may establish institutions to allow for such revisions but those institutions tend to focus on the implementation of existing rules rather than the formulation of new ones. In such settings, states can establish bans or fixed limitations on some activity and feel that the problem has been addressed. By contrast, the nature of other problems dictates the need for ongoing management, with procedural institutions being required to allow for adaptive regulation. Of course, whether a problem can be solved or only managed depends on social definitions and framings. Consider international whaling: early on, the ‘whaling problem’ was a Tragedy of the Commons among whaling states who sought international cooperation to foster mutual restraint to ensure the ‘orderly development of the whaling industry’. Whaling states could not ‘solve’ this problem through a regulatory agreement specifying a particular level of catch for the indefinite future. Instead, as with most international fisheries, states created the International Whaling Commission as a procedural institution that was mandated to meet annually to set quotas. By the mid-1980s, however, the ‘whaling problem’ had become a power struggle between whaling states and anti-whaling states about whether to allow whaling at all. By 1986, the procedural institutional structure remained but the challenge had become one that anti-whaling states, at least, thought could be solved by banning commercial whaling. Although annual meetings continue, the politics involved have changed this procedural institution into a regulatory one.

Second, scientific uncertainty also predisposes states toward procedural rather than regulatory institutions. The increasing adoption of framework-protocol strategies in IEAs reflects the desire to initiate international cooperation through procedural

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frameworks when uncertainty is large (and states are either reluctant to accept regulation or unclear as to what the best regulatory strategy is) and to establish regulatory protocols as the problem and concern about it became clearer. Thus, the 1985 Vienna Convention for the Protection of the Ozone Layer required only that states 'co-operate in the formulation of agreed measures, procedures and standards'. States established clear targets and timetables for the phasing out of ozone depleting substances (ODSs) in the 1987 Montreal Protocol and revised those targets and timetables in subsequent amendments, with each modification reflecting greater certainty about the magnitude and causes of the problem, the costs of solutions, and the willingness of states to accept regulation. Those changes have transformed the ozone regime from procedural to regulatory as the complete phasing out of many ODSs became technically, politically, and economically possible. Procedural institutions are designed to foster just such modifications of regulations in response to new knowledge. The United Nations Framework Convention on Climate Change (FCCC) has adopted a similar institutional form but, unlike the ozone regime, is unlikely to become a regulatory institution. Like the Vienna Convention, the FCCC itself established only vague requirements but did create a Conference of the Parties tasked with, *inter alia*, negotiating more substantive protocols. However, unlike the ozone regime, the climate change regime is likely to remain procedural since the economic processes that produce greenhouse gases have few technologically available and economically attractive alternatives and therefore climate change is much more likely to require long-term management than one-off solutions. As with climate change, international fisheries involve environmentally harmful behaviors that states are unwilling to wholly ban and, hence, require adaptive management with regulations revised in response to environmental, economic, and political feedback (Arvai et al., 2006).

Third, states prefer procedural to regulatory IEAs when there is sufficient political will to take joint action on some but not all aspects of a problem. The CMS agreement is designed precisely to address this dynamic. Appendix I of the CMS convention lists migratory species that are endangered, whereas Appendix II lists migratory species that are threatened and that require or would 'significantly benefit from' international agreement. When the CMS agreement was signed, Appendix I listed those species that all member states viewed as endangered and banned all killing of such animals. Appendix II listed those species over which member states disagreed about the status, need for action, and type of action that should be taken. For Appendix II species, the parties

created a procedural strategy of requiring only that relevant states 'endeavour to conclude Agreements' for the conservation of those species. Notably, those provisions have generated six treaties and eight Memoranda of Understanding that do delineate specific rules for protecting particular Appendix II species.

Incorporating science

Regardless of the institutional form, addressing environmental problems effectively usually dictates the establishment of mechanisms to incorporate scientific advice into policy-making. States may create procedural institutions for problems that are known to require adaptive management. But even in IEAs addressing well understood problems, states may establish mechanisms to ensure a ready forum for the discussion of new science about related problems. Such scientific 'institutions' may involve simply coordinating existing national research programs or exchanging data, scientific findings, and scientific personnel. But states may establish deeply collaborative monitoring and research that could not go on otherwise. LRTAP's EMEP program, noted above, dramatically expanded the network of European monitoring stations and improved data collection, analytic techniques, and national research capabilities. Many international environmental treaty organizations rely on subsidiary scientific bodies. Others rely on scientific advice from independent scientific bodies. The International Council for the Exploration of the Sea, the Scientific Committee on Antarctic Research, and the IPCC are international institutions that provide unsolicited reports and solicited advice on existing (and emerging) environmental problems. These institutions reduce scientific uncertainty but also help generate a commonly accepted body of knowledge and perceptions of a problem. They can transform a patchwork of national scientific research into a single international 'understanding' of a problem. Such common understandings, in turn, facilitate agreement on substantive and regulatory provisions, by making the problem seem larger, more urgent, or easier to resolve, and by reducing disagreement over what the problem is.

Allowing flexibility

Beyond scientific uncertainty, states are concerned about interest uncertainty, that is, the uncertainty they have about the current and future interests of their own and other states with respect to an environmental problem. Such uncertainty leads states to negotiate flexibility into international institutions (Koremenos et al., 2001).

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Even problems whose nature and causes are clear may leave states behind a 'veil of uncertainty' with respect to who will be 'losers' and who will be 'winners'. Such uncertainty may make states more cautious in reaching agreement or, alternatively, may lead them to negotiate agreements that maximize their flexibility to revise or legally renege on their commitments if these prove more costly than expected.

Creating procedural rather than regulatory institutions allows states to adopt and modify commitments progressively as the costs of those commitments become clearer. Alternatively, if states have enough environmental concern and political will to adopt regulatory rules, they may create 'relief valves' to avoid institutional conformance becoming too costly (Rosendorff and Milner, 2001). Almost all international treaties contain standard provisions that allow states to withdraw after notifying other states and waiting for a specified period of time. IEAs often provide additional and more ad hoc means of avoiding treaty obligations. IEAs allow states to join 'with reservations', to continue otherwise-banned practices if these are undertaken in certain ways, or to file 'objections' or opt out from particular provisions. Thus, having objected to the 1986 ICRW moratorium on commercial whaling, Norway has killed numerous whales commercially while remaining a treaty member in good legal standing. Although such flexibility provisions are often viewed as 'loop-holes' by environmental activists, they are often included precisely because, without them, states central to an institution's success would choose not to join.

Variation in regulatory institutions

Unlike variation within procedural, programmatic, and generative institutions, variation within regulatory institutions has received considerable scholarly attention and is therefore discussed more fully here. Regulatory institutions attempt to induce behavioral change through their primary rule systems, their information systems, and their response systems (Mitchell, 1996).

Primary rules

International institutions exhibit considerable variation in their central prescriptions and proscriptions or primary rules. Because most environmental problems can be addressed through various alternative regulatory strategies, decisions about which activity to regulate and how to regulate it will dictate which actors with what interests and capacities must change their behavior, how large and costly those changes will be, and whether other factors will

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reinforce or undercut subsequent incentives to meet agreement obligations. Negotiators pay particular attention to variation across strategies in the costs their country will incur, the benefits they might receive, and the likelihood that other states will fulfill the commitments involved. Four characteristics of primary rules that are often central to international negotiations are concerns about ambitiousness, specificity, common vs differentiated obligations, and equity.

The primary rules or obligations states accept vary considerably in how ambitious they are, that is, in the 'depth' of required behavioral changes (Downs et al., 1996). Theory suggests that states accept only 'shallow' agreements involving few, if any, costs for member states. Empirical evidence, however, shows that sometimes states do create IEAs that prove costly, sometimes with the states being aware of those costs at the time and sometimes with those costs only becoming evident later. The strength of state preferences, and conflict among those preferences, will influence the ambitiousness of institutional goals. Weak concern may cause negotiations to fail. But when it doesn't, states may start small with framework conventions, cooperative research programs, or non-binding agreements. Such outcomes may reflect universally low concern, an inability to resolve conflict between concerned and unconcerned states, or high concern but uncertainty about the best way to address a problem. Indeed, the nature of solutions shapes support and opposition as much as the nature of the problem. Proposed IEAs that are not ecologically ambitious may, nevertheless, generate resistance if their design involves high costs or imposes costs on powerful economic sectors. Thus, the FCCC and its Kyoto Protocol have evoked considerable resistance even though emission reduction goals fall far short of what climatologists consider necessary to prevent climate change. Regimes that seek deep cooperation, provide little flexibility, or involve stringent enforcement will evoke resistance unless states see sufficiently large offsetting benefits (Downs et al., 1996). Notably, framework-protocol approaches work precisely because states will accept non-ambitious collective decision making rules with the hope that they will produce more ambitious regulatory rules later.

In general, more international concern generates more ambitious primary rules. The greater the share of relevant actors who are leaders rather than draggers, the more ambitious the agreement will be. Ambitiousness is properly evaluated not by simply looking at the constraints or requirements placed on states but also by comparing those constraints and requirements to the counterfactual of what states would have done otherwise. Thus, an agreement

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requiring the stabilization of emissions of some pollutant within 10 years may be more ambitious than one requiring a 50 per cent reduction within five years if the states in the former all had increasing emissions while those in the latter either had already made, or were on emission trajectories that would have led them to make, large reductions. Thus, an IEA's ambitiousness is the degree to which states agree to take actions when matched by others that they would not take on their own.

A tradeoff also exists between ambitiousness and participation. Common wisdom suggests that successful negotiations require involving all states that have an interest in a problem (Young and Osherenko, 1993b: 16). Yet a set of 'contingent leaders' – each of whom is willing to take meaningful action but only if others do – can pursue more ambitious goals if they exclude recalcitrant draggers. Scandinavian states often have established high environmental standards even though other major contributors to the problem are unwilling, at least initially, to agree to those terms. States may create institutions that address only a fraction of a problem or engage only a fraction of the perpetrators, either because a partial solution is better than no solution or because they believe some initial steps will foster conditions that will lead currently-reluctant states to participate. This 'go it alone' power can allow an activist subset of states to reach an agreement despite the opposition of powerful states that are contributing to a problem (Gruber, 2000). Just as the six states that initiated the creation of the European Union did so over strong opposition from the United Kingdom, so too did states bring the Kyoto Protocol into existence despite clear opposition from the United States. Institutions that 'go it alone' are weaker than they might be but can still allow committed states to initiate international action without being held hostage by powerful dragger states.

IEAs also vary considerably in specificity, with some containing only vague provisions and others detailing pages of rules, requirements, conditions, targets, and timetables. When states are unconcerned or uncertain about how an environmental problem is affecting their interests, they are more likely to generate vague provisions in unambitious agreements. This lack of specificity can arise when a consensus regarding the need for action is not matched by a consensus on what to do. Vague provisions can also arise when states that have not found real compromises respond to pressure to reach an agreement – such as happens at the end of a diplomatic conference – by 'papering over' their differences (Mitchell, 2005). But a lack of initial specificity can provide the foundation for greater specificity over time. Thus, the Wetlands Convention

includes many quite vague rules, one of which requires only that states promote the 'wise use' of wetlands in their territory. However, since 1971 the Conference of the Parties has made considerable progress in attaching substantive meaning to this vague phrase.

IEAs also vary in whether they contain common or differentiated obligations. Traditional international law has relied on 'common' obligations in which each member state accepts the same regulatory requirements. Several recent IEAs, however, have adopted 'differentiated' obligations in which different groups of states or even individual states are treated differently. As an extreme, in the Kyoto Protocol 39 developed countries committed to country-specific emission limits or reductions that ranged from 8 per cent decreases to 10 per cent increases. A less extreme variant is more common, as was evident in the Montreal Protocol's granting developing, but not developed, states a 10-year 'grace period' with respect to the ODS phase-out timetable. Other agreements' rules involve nominally common obligations that were known at the time to distribute the behavioral burden unevenly. States collectively committed in the Second Sulfur Protocol to the LRTAP Convention, for example, to prevent sulfur *depositions* from exceeding certain levels but that commitment was known to require much larger emission *reductions* from some states than others. These examples are exceptions, however, and most IEAs still adopt common obligations that, nevertheless, impose different costs in practice.

What accounts for this difference in approach? Certainly the norm that agreements should impose equal obligations on all parties makes common obligations the default model. But states now appear to strive toward common obligations while being open to accepting differentiated obligations to get agreement among states with divergent interests and levels of concern. Those interests may divide states into two groups, as in the Montreal Protocol, or may leave states far more differentiated, as in the Kyoto Protocol. Differentiated obligations appear to be more a last, than first, resort, if only because they can easily be framed as politically meaningless, shallow agreements that codify states' planned behaviors rather than prompt new ones.

All three types of obligations present problems: nominally equal requirements can impose quite unequal costs in practice; considerable variation within groups of developed or developing countries means that some will benefit far more than others within either group; and allowing the self-selection of commitment levels may mean that states agree only to those actions they would have taken anyway. Yet all three have the virtue of simplicity, considered

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crucial to negotiation success, and parties appear more willing to accept obligations of these three types than the range of alternatives involving more complicated formulas (Young and Osherenko, 1993b: 14, 233).

Finally, negotiations 'succeed only when all the major parties and interest groups feel that their primary concerns have been treated fairly' (Young and Osherenko, 1993b: 14, 233; see also Young and Wolf, 1992). By definition, negotiations succeed only when relevant parties accept their terms. Indeed, it becomes tautological to contend that equitable solutions foster agreement if we define an agreement as 'equitable' so long as all the negotiating states accept it. Yet, we can distinguish here between agreements that all relevant states consider as in their interests and those they see as equitable. States are unlikely to accept agreements that do not reflect their interests and may accept agreements that further their interests even if the costs involved, or the benefits of, the agreement appear inequitable. However, they are more likely to accept agreements that further their interests and that also meet 'identifiable community standards of equity' (Young and Osherenko, 1993b: 14). Such standards do not require equal treatment, only that differential treatment be based on criteria that each state views as appropriate.

Information systems: environmental and behavioral monitoring

Regulatory IEAs also vary in their information systems. Some IEAs encourage countries to exchange the environmental information they already collect while others provide for extensive new environmental monitoring. Some IEAs coordinate and standardize data collection to foster the development of higher quality information about the magnitude, causes, and impacts of a problem. Others have created networks of scientists and monitoring stations and have pooled funding so that countries with more advanced monitoring programs help other countries develop theirs. IEAs also treat the information they receive differently. Some IEA secretariats simply archive the information they collect, while others organize, analyze, and disseminate the data to foster better environmental management. What explains such variation? As with ambitiousness, the level of concern and the magnitude of potential impacts play important roles. When states share significant concern about a poorly understood environmental problem, they will invest more in gathering information that can help them take action early enough to avert those impacts. To the extent that such impacts are thought to be small or of little concern, committing such time and resources becomes less attractive.

Beyond environmental monitoring, IEAs also vary in their concern with behavioral monitoring and transparency. With respect to

regulated behaviors and compliance, most IEAs rely almost exclusively on countries providing self-reports. Recognizing both the practical obstacles to reporting and that states are unlikely to engage in 'self-incrimination' if sanctions are the likely response, some IEAs establish reporting systems that provide positive incentives for, and build the capacity to, report (Mitchell, 1998b). Several IEAs have held workshops to help states develop the infrastructure needed to provide high quality information on their country's performance. Although intrusive monitoring systems are still rare, rising environmental concerns may make these more common in the future.

Whether IEA provisions focus on compliance information depends on the 'violation tolerance' of members regarding the problem. When states believe that the failure of other parties to meet their obligations will harm their interests, will alter their own interests in meeting their own obligations, or will undercut the IEA's ability to achieve its objectives, they are likely to demand relatively intrusive inspection procedures. Some institutions rely on proactive monitoring to identify behaviors that might not otherwise come to light ('police patrols') while others rely on passive strategies that assume that environmentally harmful activities will harm certain actors enough to lead them to report them ('fire alarms') (McCubbins and Schwartz, 1984; Raustiala, 2004). Most violations of marine pollution agreements, for example, occur in ways that are difficult to detect or difficult to link to the perpetrating actor. In response, some states have established regional 'port state control' agreements to coordinate and encourage aerial surveillance and the in-port monitoring of international shipping (Kasoulides, 1993). Likewise, CITES established an elaborate system of species import and export certificates (Reeve, 2002). By contrast, the Convention on Early Notification of a Nuclear Accident that arose in response to the Chernobyl incident relies on self-reporting by the state in which an accident occurs. Yet other IEAs involve NGOs in the institutional structure as actors who have both incentives and resources to serve as 'police patrols', watching out for the behaviors of governments and sub-state actors who may violate IEA rules. Choices among monitoring systems depend on evaluating the perceived need for monitoring and then looking for strategies that can meet that need.

Response mechanisms

Finally, regulatory IEAs vary in how they respond to regulated behaviors. Scholars have identified various institutional design implications based on distinctions in the constellations of states' interests, including distinctions among assurance, coordination, collaboration, and suasion games; coordination and incongruity problems; symmetric

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and asymmetric problems; conflicts over values, means, relatively assessed goods, and absolutely assessed goods; and commons problems, shared natural resource problems, and transboundary externalities (Martin, 1992b; Hasenclever et al., 1997; Underdal, 2002). The direct tit-for-tat that can discourage violations of trade and arms control treaties proves less useful in environmental realms where states that support IEAs are generally unwilling to harm the environment as a retaliatory sanction and, even if they did, would fail to influence perpetrating states unconcerned about the environment. Recognizing this, many scholars have stressed the need to couple economic sanctions with monitoring mechanisms that trigger them (Bernauer, 1995a: 363; Downs et al., 1996; Wettestad, 1995). Others argue that such an enforcement model is less effective than a more 'managerial' model of diplomacy, norms, and rewards (Chayes and Chayes, 1995). Indeed, rewards appear to be the only option for inducing 'upstream' actors to alter their behavior (Mitchell and Keilbach, 2001).

IEAs also attempt to induce behavioral change through 'systems of implementation review' and 'sunshine methods' involving reporting, monitoring, and review without any explicit or direct response (Brown Weiss and Jacobson, 1998; Victor et al., 1998a). Ecolabeling, certification, and prior informed consent rules may induce behavioral changes via marketplace incentives. IEAs also incorporate norms, argument, and persuasion in their efforts to influence behavior by altering notions of appropriate and inappropriate action (Finnemore, 1996; Risse, 2000). Thus, general norms regarding the appropriate relationship between environmental protection and development or regarding the precautionary principle can, over time, significantly alter how states respond to environmental problems, even if that causal influence may prove hard to demonstrate.

Choices as to how an international environmental institution should respond when states do, or do not, alter their behavior to meet IEA commitments are influenced by the underlying problem structure. IEAs addressing upstream/downstream problems do not include sanctions because upstream states will not accept agreements that legitimize the right of other states to sanction them for behaviors that, pre-institutionally, the other states could not legitimately sanction (Mitchell and Keilbach, 2001). The Montreal Protocol illustrates that 'upstream' states which contribute to – but view themselves as unharmed by – an environmental problem will not participate without some reward: India, China, and other developing countries that contributed to, but were unconcerned about, ozone loss joined the Protocol only after industrialized and concerned (that is, 'downstream') states compensated them for the costs of phasing out ODSs.

In the 1976 Convention on the Protection of the Rhine against Pollution by Chlorides, the French agreed to reduce their chloride pollution of the Rhine only in response to payments by the downstream Dutch government, with contributions from Germany and Switzerland. Notably, institutional inertia also influences institutional form, with the burden-sharing in that agreement incorporated in subsequent agreements on Rhine pollutants that had few similarities (Bernauer and Moser, 1996). Rewards may, however, make potential donors more reluctant to join the institution even as they attract potential recipients.

Although sanctions are a non-starter in IEAs addressing upstream/downstream problems, states must choose between rewards and sanctions in Tragedy of the Commons situations. In some cases, states can use the threat of mutual retaliation to support cooperation. Thus the underlying, if often implicit, incentive for states to stay within international catch quotas is the threat that excessive violations by one party will lead others to do the same and, hence, a reversion to the no-institution baseline of unrestrained fishing. Particularly in situations involving over-appropriation of an environmental resource, such retaliatory threats may help sustain international cooperation, though the poor track record of most fishery IEAs demonstrates that they do not always do so. In most cases, however, states adopt more diffuse, indirect, and unspecified reciprocity as an 'enforcement' mechanism. For example, the United States has frequently used the removal of fishing rights as a response to behaviors by whaling states that it viewed as undermining the effectiveness of the IWC (DeSombre, 2000). In such contexts, states recognize that they may avoid the 'unraveling' of cooperation that tit-for-tat sanctioning would produce by providing states that are supportive of an IEA with mechanisms for them to take actions that harm an initial violator's interests without asking them to engage in environmentally-harmful activities, which they would be unlikely to adopt in any event (Axelrod and Keohane, 1986). However, states can use rewards as well as sanctions to address Tragedy of the Commons situations. Coase (1960) argued that externalities can be resolved by victims paying perpetrators to halt harmful activities. Thus, in response to the overharvesting of North Pacific fur seals, Canada, Japan, Russia, and the United States agreed in 1911 that the former two countries would stop all seal harvesting in exchange for the latter two countries compensating them in the form of 15 per cent of their seal harvests every year (Dorsey, 1998).

Response strategies can also include capacity building. IEAs increasingly seek to influence non-compliant countries by making it easier for them to fulfill their obligations. Negotiators increasingly recognize that

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non-compliance for certain states can arise as much from incapacity and inadvertence as from intention (see Chapter 6). They also recognize that sanctions are neither appropriate nor effective if states cannot, rather than will not, meet their obligations. Non-compliance is necessarily intentional in many IEAs: consider the trade in endangered species; the harvest of fish, whales, or polar bears; or river or ocean pollution. In others, however, IEAs require the deployment of financial resources or technical expertise that developing states may not have available. When an IEA requires states to protect fragile ecosystems from large-scale socio-economic forces or to provide high quality environmental monitoring, both developed and developing states may support establishment of mechanisms that urge non-compliant countries to identify the causes of non-compliance so other countries can facilitate that compliance.

Violation tolerance also influences the strength of the responses adopted. States tend to be relatively 'violation tolerant' early on in an environmental problem's lifecycle, if only because that is the status quo situation (Young, 1999b; Chayes and Chayes, 1993). Response mechanisms may be relatively weak or non-existent. But as the issue's importance or institutional developments make states more sensitive to whether other states are fulfilling their commitments, response mechanisms tend to become stronger.

In short, states build responses into IEAs that reflect the expected sources of, and harm of, non-compliance. Where those sources are seen as intentional, they are more likely to adopt sanctions. Where those sources are seen as predominantly due to incapacity and inadvertence, they are more likely to adopt some form of facilitative approach. Where the possibility exists for both types of shortcoming, they are likely to create institutions that begin by investigating their sources and then allow for different types of responses, an approach adopted in various amendments to the Montreal Protocol.

Negotiation Participation and Institutional Membership

Before an IEA can come into existence, negotiators must sell the agreement to domestic constituencies. Negotiators may need to convince their prime minister or president that their concessions were more than offset by those of other countries and that the agreement is in their country's interests. Although uncommon, examples do exist of states refusing to sign the very agreements they helped negotiate. And countries involved in negotiations can

always reject the terms of a 'final' agreement in the hopes of re-opening negotiations to achieve better terms (Ikle, 1964: 59–75). For most countries, international treaties do not become legally binding or enter into force without legislative branch ratification of executive branch negotiations. The two-level games mentioned above require that negotiators convince domestic political actors – including both legislators and citizens – with diverse interests and perspectives that an agreement's benefits exceed its risks and costs and that no better agreement can be negotiated (Putnam, 1988). Not infrequently, government executives sign agreements that their legislatures refuse to ratify, either because the executive misjudged their domestic constituencies' interests or because those interests had shifted. Thus, the American government signed the UNFCCC and its Kyoto Protocol, and ratified the former, but has refused to ratify the latter. Many IEAs also have been signed but have not taken effect because too few countries ratified the agreement. The unwillingness of many states to ratify the 1973 MARPOL convention, for example, led to the negotiation of a 1978 Protocol that revised provisions that otherwise would have precluded the agreement from taking effect. While negotiators often feel pressure to reach 'some agreement, any agreement' by the end of an international conference, legislatures may feel no such pressure and can then take years to consider whether to ratify an IEA.

Conclusion

Whether environmental negotiations end in agreement depends on the constraints and opportunities created by structural factors, more direct forcing or inhibiting events related to the influence of particular actors and the negotiating process, and the influence of external factors and prior conditions. Young and Osherenko have called interests, power, and knowledge 'social driving forces', while leadership, context, and other variables are 'cross-cutting factors' that influence the negotiations (Young and Osherenko, 1993a: 247). It is the interaction among these factors that helps to explain whether negotiations succeed and what form any agreement takes. This chapter has delineated the factors that make states willing to engage in negotiations, the factors that influence the content of agreements, and the factors that influence whether states become members of such agreements. The next chapter takes up the questions of whether and when these efforts at negotiation lead states to take actions that are any different from those they would have taken in the absence of such agreements.