Chapter 11

International Environmental Law

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Introduction

International environmental law (IEL), as a substantive field, consists of the body of norms relevant to environmental problems of an international character – for example, because they implicate more than one state or relate to areas beyond national jurisdiction. More broadly, it includes the processes by which international environmental norms develop and are implemented, as well as the institutions that play a role in these processes.

Although IEL developed as a sub-field of public international law, it encompasses topics not traditionally considered to be part of international law, including the roles of non-state actors and of non-legal ("soft law") norms. Moreover it has developed its own distinctive doctrines, legal processes, and institutions:

- Distinctive doctrines include the precautionary principle and the principle of common but differentiated responsibilities (CBDR).
- Distinctive legal processes include the framework convention/protocol approach, tacit amendment procedures, and non-adversarial, forward-looking approaches to non-compliance.
- Distinctive institutions include the annual conferences of the parties (COPs) established by many multilateral environmental agreements (MEAs).

This chapter focuses on these distinctive features of IEL. The chapter begins by considering the standard-setting process, focusing in particular on the negotiation of international agreements and on the emergence and role of more general doctrines such as the duty to prevent transboundary harm. Next, it considers the implementation and compliance processes. It concludes by surveying the main international

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institutions relevant to the development and application of international environmental law.

Standard-Setting

Treaties

From the inception of international environmental law, treaties and other international cooperation have been the primary means of achieving international cooperation. Negotiated agreements offer several advantages over more informal mechanisms:

- They enable states to address issues in a purposive, rational manner.
- They promote reciprocity by allowing states to delineate precisely what each is expected to do.
- They provide greater certainty about the applicable norms than non-treaty sources of international law, which lack a written, canonical form.
- Finally, they allow states to tailor a regime's institutional arrangements and mechanisms to fit the particular problem.

Traditionally, treaties were comparatively static arrangements, memorializing the rights and duties of the parties as agreed at a particular point in time. Today, international environmental agreements are usually dynamic arrangements, establishing ongoing regulatory processes (Gehring 1994). The result is that, in most environmental regimes, the treaty text itself represents just the tip of the normative iceberg. The majority of the norms are adopted through more flexible techniques, which allow international environmental law to respond more quickly to the emergence of new problems and new knowledge.

Along with the principle of *pacta sunt servanda* (which says that agreements must be kept), the most fundamental rule of treaty law is that treaties depend on state consent. This is perhaps one reason why treaty norms are often characterized as "commitments" rather than "obligations" – to emphasize the self-binding quality of treaty law. Treaty norms are not obligations imposed on states; rather, they are commitments that a state voluntarily undertakes.

The development of international environmental agreements involves many design choices, including membership rules, substantive scope, legal or non-legal form, choice of regulatory instrument, stringency of commitments (both in general and for particular countries), precision, voting rules, financial incentives, reporting and review procedures, non-compliance institutions, minimum participation requirements, and ease of exit through reservations or withdrawal (Koremenos *et al.* 2001; Raustiala 2005).

One important focus of recent scholarship has been on the interconnections between these design elements (Boockmann and Thurner 2002; Barrett 2003; Gilligan 2004; Raustiala 2005). A legally binding agreement may be stronger than a non-binding instrument, but attract less participation. Inclusion of more stringent substantive commitments may make states less willing to accept strong compliance mechanisms. Ultimately, the effectiveness of an environmental regime is a function not only of the stringency of its commitments, but the degree to which states

participate and comply (Barrett 2003). So we must consider different design elements in conjunction with one another, rather than in isolation, both to understand the design choices made in existing regimes and in developing new regimes.

A second insight of recent scholarship has been to understand international environmental regimes as dynamic systems that evolve over time. International environmental law has promoted the evolution of regimes through a variety of mechanisms. These include:

- *Regular scientific assessments to help produce "consensus" knowledge*. International scientific assessments can help overcome arguments against environmental regulation based on scientific uncertainty (Mitchell 2006). For example, in the late 1970s, some European states argued against international regulation of ozone-depleting substances on grounds of scientific uncertainty. A major international scientific assessment jointly undertaken by the US National Aeronautics and Space Administration (NASA), the World Meteorological Organization (WMO), and other international and national bodies in 1986 helped set the stage for the adoption of the Montreal Protocol on Substances that Deplete the Ozone Layer the following year (Parson 2003: 251–252).
- *Soft-law instruments such as codes of conduct and guidelines*. Even when there is some agreement about the need for international standards, states may be reluctant to lock themselves into legally binding commitments and prefer to develop "soft-law" instruments such as codes of conduct and guidelines, which are less costly than treaty commitments to exit or violate (Abbott and Snidal 2000). Starting with soft-law approaches allows states to become comfortable with a regulatory approach before formalizing the approach in a treaty. For example, in developing a prior informed consent (PIC) regime for exports of hazardous wastes and dangerous chemicals, states first elaborated PIC procedures through non-binding guidelines and codes of conduct, before legally mandating the procedures in the 1989 Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and the 1998 Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade. Similarly, in the North Sea pollution regime, states were unable to adopt ambitious, precise commitments in a legally binding treaty. So they started by adopting such commitments in political declarations (Skjærseth 1998). In essence, non-binding approaches represent a type of risk-management strategy, reducing the risk to states of being bound by norms that they may ultimately deem undesirable. Although they involve a lesser degree of commitment than treaties, they can also be quite effective in changing behavior (Shelton 2004).
- *The framework convention-protocol approach*. Another technique that allows states to proceed in an incremental manner is to start by negotiating a framework agreement establishing the basic system of governance for a given issue area – the core institutions, decision-making procedures, and norms – and then develop more specific regulatory standards in subsequent protocols, after greater cognitive and normative consensus has emerged (Bodansky 1999). The theory is that once a framework convention is adopted, the international law-making process takes on a momentum of its own. States that were initially reluctant to undertake substantive commitments, but that could not object to the seemingly innocuous process established by the framework convention, will feel increasing pressure not to fall

out of step as that process gains momentum. (But for a critical view, see Downs *et al.* 2000.) This approach was first used in the European acid rain regime. In the late 1970s, there was insufficient consensus to adopt regulatory requirements limiting emissions of sulfur dioxide or other precursors of acid rain. So, instead, states adopted a framework agreement – the 1979 Long-Range Transboundary Air Pollution Convention – which in essence serves as the "constitution" for the regime. Later, after greater consensus had developed (in part as a result of information produced through the regime's monitoring program), states adopted a series of regulatory protocols addressing sulfur dioxide, nitrogen oxides, volatile organic compounds, heavy metals, and persistent organic pollutants (Levy 1993; Wettestad 2002). Similarly, in the regime to protect the stratospheric ozone layer, states began by adopting the 1985 Vienna Convention on the Protection of the Ozone Layer, which expressed concern about the problem but imposed no regulatory requirements. Two years later, parties to the Vienna Convention negotiated and adopted the Montreal Protocol on Substances that Deplete the Ozone Layer, which imposed quantitative limits on states' consumption and production of ozone-depleting substances (Parson 2003).

- *Tacit amendment procedures*. International environmental regimes need to be able to develop quickly, in response either to changes in a problem itself or to our scientific understanding of a problem. For example, when the Montreal Protocol was first adopted, chlorofluorocarbons (CFCs) and halons were seen as the principal ozone-depleting substances. Now we know that a series of other chemicals – including carbon tetrachloride and methyl bromide – also contribute to the depletion of the ozone layer. In the ozone case, scientific knowledge developed so quickly that "the CFC reduction rates agreed . . . in September 1987 were already obsolete by the time the protocol entered into force" (Sand 1991: 15). Traditionally, treaties were hard to update, since amendments require ratification by states. But most international environmental agreements now put their regulatory requirements in an annex or schedule that can be amended more easily than the main body of the treaty, through a tacit acceptance procedure under which amendments apply automatically to all parties unless a party specifically opts out. For example, the detailed regulations on whaling under the International Whaling Convention are included in a schedule that can be amended by a three-quarters majority vote, and apply to all parties unless a party specifically objects. In essence, these flexible amendment procedures vest environmental treaty regimes with ongoing regulatory authority.
- *Differential standards, to take account of differences between states in historical responsibility, capacity, and national circumstances*. States differ substantially in their historical responsibility for international environmental problems, their capacity to address these problems, their national circumstances, and their regulatory and political cultures. So a one-size-fits-all approach to international environmental problems is unlikely to get widespread support. To promote broader participation, many international environmental regimes include differentiated commitments, which are stronger for some countries and weaker for others (Rajamani 2007). For example, the Montreal Protocol gives developing countries a 10-year grace period in which to comply with its basic regulatory requirements. The Kyoto Protocol negotiations took the principle of

differentiation to an extreme, by elaborating emissions limitations requirements on carbon dioxide and other greenhouse gases only for developed countries, while specifically excluding any new commitments for developing countries.

- *Elaboration through decisions of the parties*. Decisions of the parties offer another mechanism for elaborating a regime. Often, treaties specifically direct the Conference of the Parties (COP) to develop rules on complex topics that are too difficult or time-consuming to address in the treaty text itself. The Montreal Protocol, for example, directs the parties to develop a compliance procedure; similarly, the Kyoto Protocol established a number of market mechanisms, including emissions trading and the Clean Development Mechanism, but left the elaboration of the detailed rules for how these mechanisms would work to the COP. Decisions of the parties can also give more determinate content to vague provisions in a treaty, such as the "wise use" requirement for wetlands found in the 1971 Ramsar Convention on Wetlands, or address an issue not dealt with in the treaty itself. The compliance procedure for the Convention on International Trade in Endangered Species, for example, was developed almost entirely through decisions of the parties (Reeve 2002).

Non-treaty Norms

In addition to treaty norms, which bind only parties and usually address only a limited subject area, international environmental law includes a number of more general norms:

- *The duty to prevent significant transboundary harm* was first articulated in the 1941 *Trail Smelter* case and is reflected in various non-binding instruments, including the 1972 Stockholm Declaration on the Human Environment and the 1992 Rio Declaration on Environment and Development. This duty underpins much of the rest of international environmental law, which in essence is an elaboration of this core duty (Handl 2007).
- *The precautionary principle* addresses the issue of scientific uncertainty. Formulations of the precautionary principle vary widely, but provide at a minimum that scientific uncertainty should not be a basis for inaction (Trouwborst 2002).
- *The principle of common but differentiated responsibilities and respective capabilities (CBDRRC)* provides a rationale for differentiating the commitments of developed and developing countries (Rajamani 2007). As noted above, this principle is reflected in a variety of environmental treaties, including the Montreal Protocol and the Kyoto Protocol.

In contrast to treaties, which are the product of a purposive process of negotiation, the source and legal status of these general norms of international environmental law is uncertain. Conventional accounts of the sources of international law identify two sources other than treaties: custom and general principles. In theory, the two sources differ in that customary norms are generated through the regular practice of states, engaged in out of a sense of legal obligation, while general principles are norms that reflect fundamental propositions of law, shared by legal systems around the world. But, in practice, the distinction between the two is often blurred. It is not clear, for

example, whether the duty to prevent transboundary harm is a rule of customary law, reflecting the actual practice of states, or a general principle of law. Even the International Court of Justice, in proclaiming the duty to be part of the corpus of general international law, did not identify its legal basis (Bodansky 2010: 200).

In addition to their uncertain legal status, general principles such as the duty to prevent transboundary harm and the precautionary principle are very general, leaving states with significant leeway in deciding what to do. States have a duty to prevent transboundary environmental harm, but what constitutes "significant" harm, and what standard of care must states use to avoid harm? States ought to undertake precautionary action, but in what circumstances and to what degree? Because virtually any behavior that a state might wish to engage in, for self-interested reasons, could be reconciled with these very general standards, states are able to interpret these norms in self-serving ways, with little cost to their reputation. Although courts could potentially give non-treaty norms more determinate content by applying them in particular cases, international environmental law lacks tribunals with general jurisdiction over environmental disputes, so these norms are rarely applied judicially. As a result, norms of non-treaty law operate primarily as meta-rules. They do not determine the result in particular disputes or negotiations; rather, they serve a discursive function, setting the terms of international debates about environmental issues and providing evaluative standards that actors can use either to justify their own proposals or arguments or to criticize those of others.

Implementation

The explosion of international environmental law-making over the past several decades makes it easy to fall prey to the view that the development of international environmental agreements, in itself, represents progress – that texts matter and that stronger texts mean better environmental protection. But words on paper are not enough. Although they represent an important first step, what matters, in the final analysis, is not the number of treaties that have been negotiated or even ratified, but rather their effectiveness in improving the quality of the environment. Accordingly, political scientists and international lawyers have given increasing attention to the issue of effectiveness over the last two decades (Brown Weiss and Jacobson 1998; Victor *et al.* 1998; Miles *et al.* 2002).

Implementation is the process by which policies get translated into action and is integral to effectiveness. It can encompass a wide range of measures, such as elaborating a policy through more specific laws or regulations, educating people about what a rule requires, building a new power plant that emits less pollution, and monitoring and enforcing compliance. In a broad sense, all of these measures can be considered part of the implementation process.

Implementation is a particular challenge for international environmental law, because it typically aims to control not merely state conduct but private conduct. Success depends on a wide variety of factors, including:

- *The depth or stringency of the commitment*. The bigger the required change from the status quo, the more likely it is that implementation will be costly and will conflict with entrenched interests.

- *The type of commitment involved*. Commitments to engage in particular conduct (for example, adopting an oil pollution discharge standard) are more directly under a party's control than commitments to achieve some general result (reducing national emissions by a specified amount, as in the Kyoto Protocol), which depend on a multitude of factors that may be difficult to change.
- *The capacity of the state*. Implementation generally requires resources and expertise to draft laws, monitor behavior, administer a permitting scheme, prepare reports, bring prosecutions, and so forth.
- *The degree to which implementation converges with other domestic policy objectives*. For example, a country is more likely to implement a commitment to reduce carbon dioxide emissions if doing so will also reduce urban air pollution or contribute to energy security.

As in most areas of international law, states serve as the primary transmission belt for putting international environmental rules into effect. International environmental agreements impose obligations on states and rely on states to implement their commitments. For this reason, the success of multilateral environmental agreements depends on the degree to which they are "domesticated" (Hanf and Underdal 1998).

Treaties vary considerably in how much freedom they give states in the choice of implementation methods. At one end of the spectrum, some agreements set forth quite specific obligations of conduct that leave little discretion. For example, the International Convention for the Prevention of Pollution from Ships (MARPOL) requires flag states to prescribe precise rules for the construction and design of oil tankers, and to prohibit and sanction violations of these standards by vessels operating under their authority. Often, however, international law does not specify any particular implementation method, leaving it up to each state to decide how it will fulfill its international obligations in accordance with its own domestic law. A typical formulation on implementation, found in many treaties, simply requires states to take "appropriate" measures. This allows each state to take into account its own legal system, regulatory culture, and other national circumstances in determining what measures are "appropriate." At the far extreme, treaties establishing an obligation to achieve some overall result, such as the national emissions targets in the Kyoto Protocol, give states almost complete flexibility in determining how they will reach the required outcome – whether by means of taxes, product standards, emission limits, voluntary agreements with industry, subsidies, education, and so forth.

A threshold issue in treaty implementation is whether implementation requires legislation. For a variety of reasons, sometimes the answer is no. A treaty may focus on governmental actions such as reporting, which can be performed by the executive branch on its own authority, without any need for legislative approval. Or, under a country's constitution, treaties may have the force of domestic law directly, making additional legislative implementation unnecessary. Or existing legislation might provide the necessary authority to implement a treaty's obligations.

Even when implementing legislation is needed, the adoption of legislation is usually only the first step in the implementation process. Most treaties require various types of administrative implementation, such as further rule-making to give greater specificity to general legislative mandates, monitoring and assessment, preparation of reports, issuance of permits, and the investigation and prosecution of alleged

violations. Consequently, as a recent study of implementation observed, "[o]ne cannot simply read domestic legislation to determine whether countries are complying . . . [Compliance] involves assessing the extent to which governments follow through on the steps that they have taken" (Jacobson and Brown Weiss 1998: 2, 4).

National courts have played a relatively modest role thus far in enforcing international environmental law (Bodansky and Brunnée 2002). In a few cases, national courts have used international environmental law to review governmental action or to interpret national law. For example, in *Minors Oposa*, the Philippine Supreme Court applied the principle of intergenerational equity to allow a group of children to challenge licenses to harvest timber. But, generally, national courts have become involved in the implementation process only indirectly, through their role in applying a state's domestic implementing legislation.

Compliance

Most states may comply with most of their international commitments most of the time, as Louis Henkin famously proclaimed (1979: 47). But violations remain a problem. Even comparatively easy, procedural commitments, such as the obligation to file reports, often go unfulfilled by states. As a result, we cannot rely on states to implement their international environmental commitments. International measures are also sometimes needed to make international environmental law effective.

International environmental regimes have developed a wide variety of institutions and mechanisms to address the problem of compliance (UNEP 2007). Some of these are specified in the treaty text itself, others have been elaborated through decisions of the parties, and still others have developed more informally through practice over time.

Two Models of Compliance

Scholars have developed two models of compliance, which reflect different assumptions about state behavior, the causes of non-compliance, and the role of the international system in responding. The enforcement model views states as unitary, rational actors that will violate an agreement when it suits their interests, and concludes that sanctions are needed to induce states to comply (Downs *et al.* 1996). In contrast, the managerial model of compliance sees states as complex organizations that have a propensity to comply with treaties unless strong countervailing circumstances are present, and explains most non-compliance as the result of mistakes, changes in circumstances, or lack of capacity, rather than of a deliberate decision to violate (Chayes and Chayes 1995). On this view, the function of a compliance system is not to punish non-compliance, but rather to encourage and facilitate compliance – for example, by providing financial and technical assistance to states, thereby lowering the costs of compliance; clarifying the content of international obligations; or requiring states to file reports and prepare national implementation plans, which help mobilize and empower domestic constituencies

Generally, the managerial approach to compliance predominates in international environmental law (Breitmeier *et al.* 2006). The response to Russia's non-compliance with the Montreal Protocol in the mid-1990s provides an illustration. Rather than recommend sanctions, the other parties (through the Protocol's Implementation

Committee) in essence negotiated a phase-out plan with Russia, involving subsidies from the World Bank to close the Russian facilities that produced CFCs. As a result, Russia closed its last production facility in 2002, thereby coming into compliance with the Protocol (Yoshida 1999: 135–139).

Sources of Information

Regardless of which model of compliance one adopts, obtaining accurate information is a critical first step. States that deliberately violate an agreement will be deterred by sanctions only to the extent that they fear discovery. The efficacy of enforcement measures is thus a function not only of the magnitude of the sanctions but also of the likelihood of detection.

Generally, national reporting is the primary source of information concerning implementation and effectiveness (Raustiala 2001). In addition, NGOs are an important, independent source of information. Greenpeace, for example, monitors whaling activities and trade in hazardous wastes, whereas TRAFFIC gathers information on illegal trade in wildlife products.

Comparatively few international environmental agreements have formal procedures for the review of national reports, but many have more informal arrangements either to review the accuracy of the information provided in national reports (a process usually referred to as verification) or to evaluate performance (Raustiala 2001). The UN climate change regime establishes perhaps the most detailed review process to date, involving review of individual developed country reports by expert review teams.

Promoting Compliance

Multilateral environmental agreements generally take a proactive approach: they do not merely respond to non-compliance *ex post*, but actively seek to promote compliance *ex ante* through the provision of various types of financial and technical assistance (Sand 1999). Virtually all multilateral environmental agreements provide some implementation assistance. In some cases, MEAs provide only quite limited support, for example, to prepare reports or provide training. In other cases, they provide much more significant assistance to implement substantive requirements designed to reduce pollution or conserve resources. Beginning with the 1973 World Heritage Convention, multilateral environmental agreements have often established special funds to assist with implementation. The World Heritage Fund is quite small, with an annual budget of about only US$4 million to help countries identify and propose sites for inclusion on the World Heritage List, prepare management plans, and train personnel. In contrast, the Montreal Protocol's Multilateral Fund provides more than US$150 million per year (and more than US$2.8 billion since its inception in 1990) to support specific projects to phase out the use of ozone-depleting substances, including through technology transfer.

Responding to Non-compliance

Historically, international law sought to address issues of non-compliance through dispute settlement initiated by the injured against the culpable state. But although

the last decade has witnessed a modest rise in environmental litigation, traditional dispute settlement still plays a small role in the implementation of international environmental law. The international law of state responsibility is geared primarily to bilateral enforcement by the "injured state" against the non-compliant state, not to global commons problems such as ozone depletion or climate change, where the harms are widely distributed and where, as a result, no individual state is likely to have a sufficient incentive to undertake enforcement actions.

Rather than rely on traditional dispute settlement to address the problem of non-compliance, many multilateral environmental regimes have developed flexible, political approaches that aim to identify the sources of non-compliance in a particular case and find appropriate responses (Wolfrum 1998). In contrast to traditional dispute settlement, these new treaty-based compliance regimes are:

- *Political and pragmatic, not legalistic*. They view compliance and non-compliance as part of a continuum, not in all-or-nothing terms. On this continuum, the difference between a small and a big violation, or between bare compliance and overcompliance, may be more significant than the difference between compliance and breach.
- *Forward- not backward-looking*. Their goal is to manage environmental problems in order to achieve a reasonable level of compliance in the future, not to establish legal rights and duties or to rectify past breaches. Accordingly, one of the principal responses to non-compliance is to provide assistance – an approach that seems bizarre from the perspective of traditional dispute settlement because it arguably rewards a state for its internationally wrongful act.
- *Non-adversarial rather than contentious in nature*. The procedures are collective rather than bilateral in nature. Any state may initiate a case, with no need to show injury. In many cases thus far, the non-compliant state itself has initiated proceedings.

The Montreal Protocol's Non-compliance Procedure exemplifies this more flexible approach and has served as the model for several other agreements. Today, most multilateral environmental agreements have either already adopted a non-compliance procedure or are considering doing so.

Few multilateral compliance procedures rely significantly on sanctions (UNEP 2007: 117–118). Typically, the most significant "sanction" imposed by international environmental regimes is exposure. Although exposure may seem to be a modest penalty, it can result in significant costs. It subjects a state to adverse publicity both at home and abroad, it makes future treaty negotiations more difficult, and it can "infect other aspects of the relationship between the parties" (Chayes and Chayes 1995: 152) and even a state's status as a member in good standing of the international community (Young 1992: 176–177). In addition to exposure, some international environmental regimes require delinquent states to develop compliance action plans that detail how they will bring themselves back into compliance, on the assumption that non-compliance is usually the result of poor planning and lack of capacity.

What additional sanctions might be possible? Trade measures offer a potential lever, and the Montreal Protocol provides for trade restrictions as a response to

both non-participation and non-compliance. The use of trade measures to promote participation and compliance has proven highly controversial, however, and other international environmental agreements have thus far not followed the Montreal Protocol's lead.

Financial penalties are also sometimes suggested as a sanction, but they have proven to be politically unacceptable. In any event, they would not solve the enforcement problem because they themselves require enforcement. (If a state violates an environmental commitment, what reason is there to think that it will comply with an obligation to pay a financial penalty?) At most, non-compliance may result in a loss of eligibility for existing funding, rather than the imposition of penalties. But even that penalty is unusual because states fear that cutting assistance will exacerbate rather than solve non-compliance. So, in practice, non-compliance more often leads to greater rather than less financial assistance – exactly the opposite of an enforcement model.

A final possibility would be to impose sanctions directly on the individuals responsible for violating international environmental law, rather than on the state. Whether criminal punishment would be appropriate is debatable, however, since most environmental problems result from everyday activities rather than from "bad" actors. Even with respect to deliberate, widespread environmental damage, which might merit criminal punishment, proposals to designate "ecocide" as an international crime (Gray 1996) have attracted little support. Individual criminal responsibility for environmental offenses is rare even in domestic law and seems unlikely anytime soon at the international level.

Institutions

International environmental law has no international institution with general governance functions – it has no World Environmental Organization to match the World Trade Organization. Instead, a patchwork of international institutions address environmental issues, leading to concerns about overlap, duplication of effort, lack of coordination, and even conflict. Some institutions are global, others regional or bilateral. Some relate to a particular issue area such as whaling or forestry, others have a broader environmental mandate, and still others, a mandate encompassing non-environmental as well as environmental issues. Some are scientific in orientation, others focus on capacity building or have a more policy-oriented role. (See generally DeSombre 2006.)

The international institution with the broadest competence over environmental issues is the United Nations Environment Programme (UNEP), established in the wake of the 1972 Stockholm Conference. In contrast to UN specialized agencies, UNEP does not have a separate treaty basis. Instead, like the UN Development Programme and the Commission on Sustainable Development, it derives its authority from the UN General Assembly, which created it (and which, in turn, derives its authority from the UN Charter). UNEP is small, with only a few hundred professional staff and a budget of under US$220 million per year, and it lacks significant decision-making authority. Instead, it has played a largely informational and catalytic role, helping to spur the negotiation of treaties such as the regional seas agreements in the 1970s and 1980s, the 1987 Montreal Protocol, the 1989 Basel Convention on

hazardous wastes, and the 1992 Biodiversity Convention, as well as the development of various soft-law instruments.

Perhaps the most distinctive types of international environmental institutions are those established by individual multilateral environmental agreements (MEAs) (Churchill and Ulfstein 2000). Virtually every MEA now establishes a COP, which meets on a regular basis (usually annually), is open to all treaty parties, and serves as the supreme decision-making body for its constitutive agreement. These meetings go by different names in different treaty regimes. In the whaling regime, for example, the annual meeting of the parties is styled the International Whaling Commission (IWC), and the state representatives are referred to as "commissioners." In contrast, the meeting of the parties to the Long-Range Transboundary Air Pollution Convention is called the Executive Body, even though it is open to all of the treaty parties. Powers of the COP may include negotiating and adopting new protocols or annexes, amending existing agreements, and making decisions to elaborate or interpret the existing treaty rules. The decision-making authority and procedures of COPs vary from agreement to agreement. Some have limited authority (usually by a two-thirds or three-fourths majority vote) to adopt new environmental rules that bind all of the treaty parties, except those that file a specific objection. Other powers may include establishing subsidiary bodies, reviewing implementation, and monitoring compliance.

In addition to a regular meeting of the parties, most international environmental regimes have recognized the utility of a permanent secretariat. Even the Antarctic Treaty system, which for years had declined to establish a secretariat, recently decided to do so. Treaty secretariats perform largely administrative functions, such as organizing meetings, gathering and transmitting information, and administering training and capacity-building programs. But they may also play more substantive roles such as commissioning studies, setting agendas, compiling and analyzing data, providing technical expertise, mediating between states, making compromise proposals, monitoring compliance, and providing financial and technical assistance (Biermann and Siebenhüner 2009).

Why do states create international environmental institutions such as these? To what extent are these institutions merely creatures of the states that created them, as opposed to actors in their own right? How influential and effective are they in addressing environmental problems?

According to functionalist theories of international organizations, states establish international institutions to perform functions that states have difficulty performing individually. Among these functions are collecting information, monitoring compliance, and, in general, addressing collective action problems and providing public goods. The most basic rationale for international institutions is efficiency: international governance can be provided more easily and efficiently through a permanent institution than on a purely ad hoc, decentralized basis. Imagine the difficulties of addressing ozone depletion if every time states wanted to do something collectively, they had to organize a diplomatic conference – choosing a time and place, designating a secretariat, deciding on rules of procedure, and agreeing on relevant sources of information. International institutions, like business firms, reduce transaction costs by eliminating the need to define procedures and roles on a constantly recurring basis, and by allowing decisions to be made in a centralized, coordinated manner. This not

only promotes efficiency, but also creates greater predictability and makes commitments by states to address a particular problem through international cooperation more credible.

According to this functionalist, statist approach to international organizations, international organizations are essentially agents of states, which exercise delegated authority. As agency theory teaches, however, agents have their own interests and do not necessarily act exactly as their principals might have wished. The same is true of international environmental institutions. Although they are created by states, they are usually not merely vessels for the transmission of state preferences. Rather, they are actors in their own right, with their own functions, decision-making rules, and organizational cultures, and often their own personnel (who serve as international civil servants rather than as state representatives) (Vaubel 2006).

In analyzing international institutions, we can array them along a spectrum, based on their degree of autonomy from states. At one extreme, an international institution such as the G8 or the Antarctic Treaty Consultative Meeting serves merely as an intergovernmental forum; at the other, the European Court of Human Rights operates as an autonomous actor in deciding cases under the European Convention on Human Rights, with a stable budget and independent judges. International law uses the concept of "legal personality" to denote the point along this spectrum at which an international institution is considered sufficiently autonomous to have a separate legal existence and to be able to act in its own right for certain legal purposes – asserting claims, entering into treaties, and exercising other implied powers that are necessary for it to fulfill its functions.

Most international institutions lie somewhere in between the two extremes of intergovernmental creature and autonomous actor. They have a dual or hybrid character, usually with different components reflecting their intergovernmental as opposed to their more autonomous/independent elements. The United Nations, for example, consists of the General Assembly and Security Council on the one hand, composed of states, and the secretariat on the other, composed of international officials. Similarly, the World Bank consists of a Board of Governors, representing the member-states, as well as a permanent staff headed by a president and Board of Directors. In referring to the United Nations or the World Bank, it is important to be clear which component one means. When commentators criticize the UN for failing to stop the genocide in Darfur, for example, do they mean the secretariat, or the member-states, or some combination of the two? Or when analysts write that the World Bank has the authority to develop operational policies relating to the environment, do they mean that the Board of Directors and permanent staff can do so on their own, or with the approval of the Board of Governors?

Conferences of the parties lie toward the intergovernmental rather than the supranational end of the spectrum. Even if meetings of the parties are only forums for states to meet and interact, however, they play a crucial role in keeping attention focused on an issue. The annual meetings of the International Whaling Commission, for example, help ensure that whaling remains on the international policy agenda, just as meetings of the parties to the Convention on International Trade in Endangered Species (CITES) provide a focal point for efforts to limit trade in elephant ivory, rhino horn, or sturgeon. In contrast, the 1940 Western Hemisphere Convention, which failed to provide for any institutional follow-up, is largely forgotten, with

little if any effect on state behavior, despite strong substantive provisions. Regular meetings serve to enmesh states in an international process that takes on a life of its own. Attendance at regular meetings helps to socialize state representatives; they begin to develop a collective culture that tends to make them act differently, as a group, than they would act individually as agents of their states. In this manner, a COP can develop into something more than simply a vehicle for the transmission of state preferences and lead to different results than if states acted on their own.

To the extent that international institutions allow voting (rather than simply unanimous or consensus decision-making) or include only a subset of the treaty parties, they assume an even more clearly corporate character. By participating in an institution that allows decisions to be made by a qualified majority vote, or that establishes bodies with limited membership (such as the UNEP Governing Council, the Global Environmental Facility (GEF) Council, or the CITES Standing Committee), a state accepts a process that can result in decisions that it opposes. To be sure, most multilateral environmental agreements give objecting states the right to opt out of decisions with which they disagree. But exercising this right can be difficult, particularly for weaker states, which fear alienating other treaty parties. As a result, states may end up acquiescing to decisions that they dislike. For example, southern African countries such as Botswana and South Africa ultimately accepted the ban on trade in elephant ivory adopted by CITES in 1990, even though they had argued strongly that the ban should not apply to them because they had successfully controlled poaching.

Some fear that the autonomy of international institutions can create pathologies – perhaps most importantly, lack of accountability (Barnett and Finnemore 1999). This concern, though valid, needs to be kept in perspective. As with any organization, international institutions can produce agency costs. At the same time, even the strongest environmental institutions are still comparatively weak. They lack independent resources and are dependent on states for funding. They even lack general authority to adopt binding rules or decisions. In short, international institutions do not replace anarchy with hierarchy but, rather, with looser forms of governance. They depend for their influence not on material power, but on their perceived neutrality, expertise, and ability to provide benefits to states, all of which contribute to a belief, more generally, in the legitimacy of multilateral governance.

Evaluating the New Directions in International Environmental Law

In its brief history, international environmental law has failed to solve many pressing problems (most notably, climate change and loss of biodiversity), but it has also had some notable successes (including protection of the ozone layer and prevention of oil pollution). In achieving these, it has displayed impressive ingenuity, developing a wide range of mechanisms to set standards and promote implementation.

On the standard-setting side, international environmental law has developed distinctive approaches, including the framework convention/protocol approach and tacit amendment procedures. Similarly, on the compliance side, the picture also looks quite different from the standard approach of international law, which focuses on the concepts of breach, state responsibility, invocation of responsibility by the injured state, dispute settlement, and remedies such as restitution and

compensation. In contrast to this traditional model, international environmental regimes have developed their own *sui generis* arrangements, aimed not so much at determining state responsibility and imposing remedies as at making the regime more effective in the future.

Finally, in terms of institutions, the central international environmental institution – the COP – represents a new form of international cooperation. From the perspective of general international law, it is neither an intergovernmental conference nor a traditional international organization but a combination of the two.

Together, these changes have transformed international environmental law into a distinct field, with its own characteristic methodologies and techniques. In the process, they have blurred not only the (already fuzzy) line between international law and politics, but also the lines between public and private, and international and domestic. In international environmental law, the private sector engages in the quintessential public task of general standard-setting through regimes such as the International Organization for Standardization and the Forest Stewardship Council. And in MARPOL, private-sector actors play a key role in the compliance process through the inspection and certification of oil tankers.

Some express concern about these developments, fearing that they erode the fundamental distinctiveness of law as a social instrument (Koskenniemi 1993). However, the emergence of new approaches to standard-setting and compliance represents an understandable and appropriate response to the distinctive characteristics of international environmental problems:

- These problems are physical as well as legal and political and involve a great deal of technical complexity.
- They result primarily from private rather than governmental conduct.
- They are highly uncertain and rapidly changing.

In order to address international environmental problems, we therefore need to develop dynamic regulatory regimes that can respond flexibly to new knowledge and problems, and that take a pragmatic and forward-looking approach to issues of compliance and effectiveness.

This facilitative approach to international environmental law is less ambitious but more realistic than the common goal of developing international laws "with teeth" (i.e. coercive powers). It views international environmental law as a process to encourage and enable, rather than require, international cooperation. Instead of pushing for the development of supranational institutions, it accepts state sovereignty as a given. It attempts to help states achieve mutually beneficial outcomes, for example, by building scientific and normative consensus and by addressing barriers to compliance, such as mistrust between states and lack of domestic capacity.

This is a comparatively modest agenda. Over time, however, it can contribute to greater international cooperation and thereby to the solution of environmental problems such as climate change. To be effective, international environmental law must understand not only its role but its limits. It must focus on those aspects of a problem where it can make a difference, recognizing that it is part – but only part – of the solution.

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