

## CHAPTER 20

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# ENVIRONMENT

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THIS chapter surveys settings under the auspices of international organizations and institutions that address the environment and highlights a number of underappreciated structural attributes of international environmental governance. A variety of approaches to treating the environment on the multilateral level are categorized, resulting in a typology of both international institutional structures and the diversity of international instruments and policy tools available for promoting substantive international environmental policy. Utilizing examples that are intended to be illustrative of specific aspects of the challenges presented by international environmental policy and law rather than exhaustive,<sup>1</sup> the chapter concludes by examining the extent to which form effectively follows function on a variety of subject matter areas from the point of view of multilateral governance.

A number of conclusions emerge from this analysis. First, many international organizations whose functional orientation is not primarily environmental, including the Organisation for Economic Co-operation and Development (OECD) and the World Trade Organization (WTO), are very active on environmental issues. Further, only one international institution—the United Nations Environment Programme (UNEP), which is not even formally an international organization—is charged with the environment as its primary mission. Third, the treatment of the

<sup>1</sup> This chapter considers only actions taken within the context of public international organizations and institutions and does not address concerted action by private actors in an international context, such as in the International Organization for Standardization (ISO), which lies beyond the scope of this analysis.

environment is highly compartmentalized and fragmented, distributed among multiple multilateral institutions and international agreements. Last, an identifiable model of an organic treaty establishing a comprehensive, self-contained regime has emerged in recent years. The environmental-treaty-as-governance-structure is an alternative to, although in some ways the functional equivalent of, a formal international organization as an international institutional vehicle for addressing environmental issues.

## UNITED NATIONS SYSTEM

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This section addresses environmental activities within the United Nations (UN) system narrowly understood as including entities that ultimately report to the General Assembly. Primarily for the sake of establishing institutional distinctions, the work of specialized agencies established pursuant to their own constitutive treaties is treated in the following section. The significance of this delimitation, however, should not be overemphasized, as with almost everything in the field of environmental governance strict compartmentalization as a conceptual matter is difficult or impossible.

### High-Level Conferences and Agenda Setting

Although a number of multilateral environmental agreements predate it, the UN Conference on the Human Environment, held in Stockholm in 1972, is generally considered a major turning point that initiated the development of truly international environmental policy and law. The Stockholm meeting produced a conference declaration containing twenty-six principles and an action plan including 109 recommendations for future implementation at the international level by both states and the UN.

Among its more concrete accomplishments, the Stockholm Conference recommended the creation of a Governing Council for Environmental Programs and Environment Secretariat headed by an Executive Director. The General Assembly subsequently established the UNEP, virtually the sole universal international institution whose mission is strictly environmental in nature. The Stockholm Conference left a legacy that resulted from meeting's identification of the need for multilateral collaboration and concerted action with respect to the environment as a matter of urgency in international environmental policy and law.

On the twentieth anniversary of the Stockholm Conference, the UN sponsored a Conference on Environment and Development (UNCED), the so-called “Earth Summit,” in Rio de Janeiro. The 1992 Earth Summit was expressly and self-consciously styled by its organizers as a successor to the earlier Stockholm Conference. More than 180 states were represented at, and over 100 heads of state or government attended, the Rio meeting, which was the largest summit-level conference to that date.

Like the Stockholm meeting, UNCED adopted an action plan for the future, known as Agenda 21, and created a new organ of the UN, the Commission on Sustainable Development (CSD) specifically to oversee subsequent implementation. The Conference also adopted a statement analogous to the Stockholm Declaration—the Rio Declaration on Environment and Development<sup>2</sup>—and two major multilateral conventions, one addressing climate change and the other biological diversity. Follow-up meetings have since been held at ten-year intervals in Johannesburg in 2002 and Rio in 2012, respectively, coordinated by the CSD as one of a number of functional commissions that report to the Economic and Social Council (ECOSOC). Although receiving a great deal of public attention, from a structural point of view the Stockholm Conference, UNCED and succeeding events are best understood as freestanding agenda-setting exercises, intended to catalyze further action in the form of relatively specific follow-up activities to be pursued in other UN bodies—chiefly although not exclusively UNEP.

## UN Environment Programme

As the principal structural innovation from the 1972 Stockholm Conference, as one of the few international institutions devoted strictly to the environment, and due to its global mandate, UNEP has received a great deal of attention as a principal node in the structure of global environmental governance. Formally speaking, UNEP is a UN program, reporting to the General Assembly through ECOSOC, and not a specialized agency. Formerly overseen by a Governing Body of fifty-eight members elected by the General Assembly for four-year terms, in 2013 as part of an attempt to enhance UNEP’s effectiveness the Governing Body was replaced by the UN Environment Assembly, with universal membership. The Secretariat, headed by the Executive Director, is headquartered in Nairobi, with six regional offices.<sup>3</sup>

<sup>2</sup> See, e.g., Jeffrey D. Kovar, “A Short Guide to the Rio Declaration,” *Columbia Journal of International Environmental Law & Policy* 4 (1993): 119–40; David A. Wirth, “The Rio Declaration on Environment and Development: Two Steps Forward and One Back, or Vice Versa?,” *Georgia Law Review* 29 (1994): 599–654.

<sup>3</sup> See <http://www.unep.org/pdf/UnepOrganigram.pdf> (UNEP organogram).

Through what is now known as the Division of Environmental Law and Conventions (DELIC), UNEP specifically addresses the progressive development of international environmental law, governance, and policy. UNEP has played a major role as a forum for the negotiation of major global environmental agreements, including those on exports of hazardous wastes and chemicals and pesticides, regulation and elimination of persistent organic pollutants, protection of the ozone layer, and the UNCED convention on biological diversity. DELIC coordinates with the secretariats for these agreements, as well as others on migratory species and international trade in endangered species.

UNEP has also served as a forum for negotiating any number of nonbinding or “soft” instruments on issues such as management of hazardous waste, trade in chemicals and pesticides, and environmental impact assessment. In any number of cases, these good-practice standards and guidelines have served as precursors to binding instruments, allowing states to gain experience and become comfortable with international cooperation and harmonization in a voluntary mode before accepting the binding obligations contained in a multilateral treaty. UNEP has also provided technical assistance, particularly to developing countries, and managed clearinghouses for exchange of environmental information and data. To that extent, on the issues it addresses, UNEP might be called a “full service” organization, providing opportunities for a wide range of policy options ranging from providing advisory perspectives upon request to crafting binding obligations and overseeing their subsequent implementation.

## **UN Economic Commission for Europe**

The UN Economic Commission for Europe (ECE) is one of a number of regional commissions—including those for Africa, Latin America and the Caribbean, Asia and the Pacific, and Western Asia—that report to ECOSOC. The fifty-six member states of the Commission include North America, Europe, Russia, Central Asia, Turkey, and Israel, comprising an area of 47 million square kilometers. Its Secretariat is located in Geneva. Unlike UNEP and the CSD, the ECE, although a UN body, has a limited, regional geographic scope.

The treatment of the environment in the ECE has its roots in diplomatic efforts in a security context at least fifteen years before the end of the Cold War, most notably in the context of the Conference on Security and Cooperation in Europe (CSCE), popularly known as the “Helsinki process.” As the CSCE itself had little organizational structure or capacity to oversee implementation of this mandate, the ECE was a natural choice among then-existing international institutions. Especially with respect to the then-emerging issue of acid precipitation, involving long-range transport of pollutants in both directions across the Iron Curtain, the ECE had the

advantage of including both the NATO countries of Western Europe and North America and those of the Warsaw Pact, namely the USSR and its Eastern European allies. Some of those activities, including the environment, have now been taken up by the Organization for Security and Co-operation in Europe.

The ECE is now active in a number of substantive environmental policy areas, under the direction of its Environmental Policy Committee. Most notably, the ECE has served as a forum for the negotiation of major regional agreements on (1) transboundary air pollution; (2) transboundary watercourses and international lakes; (3) transboundary effects of industrial accidents; (4) environmental impact assessment, a tool for studying environmental effects of interventions in the ecosphere before they are undertaken; and (5) access to information, public participation in decision-making, and access to justice in environmental matters.

The ECE Secretariat services periodic meetings of the parties to these agreements, which otherwise have much in common with the formally freestanding multilateral environmental regimes discussed later in this chapter. For example, eight ancillary protocols have been adopted to the ECE's 1979 Convention on Long-Range Transboundary Air Pollution (LRTAP), whose Executive Body comprising representatives of all states parties to the agreement meets annually. Like much else in the field of environmental governance, the ECE's work is something of a hybrid among models that tend to merge fluidly one into another.

## UN SPECIALIZED AGENCIES AND RELATED ORGANIZATIONS

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Among UN specialized agencies and those identified by the UN as related organizations, none deals exclusively with environmental policy, and most of those that do have rather different mandates. This is hardly surprising, as the environment as a substantive issue area cuts across functional lines, both engaging and being engaged by other substantive fields.

### International Maritime Organization

In addition to its work on maritime security and safety, the International Maritime Organization (IMO) has served as a forum for negotiating at least two major agreements designed to protect the marine environment. As with the ECE-sponsored

agreements discussed in the previous section, these are organic instruments designed to establish institutional architecture that will be responsive over time to new scientific evidence and progressive policy development. Similarly, the IMO provides secretariat services and sponsors periodic meetings of the states parties to these agreements.

The 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention) is a multilateral agreement of potentially global scope designed to address one component of the maritime pollution problem, namely dumping at sea. The original London Convention adopted a “black list” of toxic substances whose dumping was prohibited altogether and a second “grey list” of substances, such as wastes containing other heavy metals, which require a special permit in advance. In an example of the malleability of multilateral treaty regimes, in 1996 the states parties to the 1972 London Convention essentially scrapped the original agreement and replaced it with a new Protocol based on a significantly different regulatory design that supersedes the existing 1972 instrument for parties to both agreements. Adopting a precautionary approach, the London Protocol turns the regulatory design of the earlier agreement on its head by prohibiting ocean dumping altogether unless the activity is specifically authorized by the new agreement. Among the very restricted categories of waste for which ocean disposal is allowed are sewage sludge, waste from fishing operations, and organic material of natural origin.

The 1973 International Convention for the Prevention of Pollution from Ships, as modified by a 1978 Protocol (MARPOL 73/78) is a second major environmental agreement adopted under IMO auspices. Like the London Convention and Protocol, the MARPOL regime is not a static snapshot, but a living entity intended to adapt to changed circumstances or policy developments over time. While that may be desirable from a policy point of view, the legal mechanics of modifying multilateral agreements can be daunting. For example, customary international law identifies an amendment to a multilateral treaty as a new agreement, requiring a state’s affirmative consent to be bound.<sup>4</sup> While this rule assures that states have not taken on legal obligations involuntarily, it can quite evidently fragment the treaty regime by establishing classes of parties with differing obligations.

MARPOL addresses this problem in part by establishing limited nonconsensus procedures. The agreement sets out simplified mechanisms for adopting or amending technical annexes that require approval by only a qualified majority—two-thirds of the parties comprising not less than 50 percent of gross tonnage of the world merchant fleet. After a specified “opt-out” period, those actions then become binding on all states that have not objected to them. This procedure allows a subset of states to adopt a policy without triggering blocking behavior by those that are not

<sup>4</sup> Vienna Convention on the Law of Treaties, Arts. 39 and 40, 8 ILM 679 (1969).

in agreement. In principle, the consequences of publicly rejecting an international standard—the “mobilization of shame”—tends to discourage states from rejecting new standards. Although most international regimes, including those addressing the environment, operate by consensus, majority voting may be especially desirable for highly scientific and technical matters. Indeed, the example of MARPOL suggests that decisions taken pursuant to an established treaty regime administered in the structured setting of an international organization are an area where nonconsensus decision-making may be particularly palatable to states.<sup>5</sup>

## World Bank and Regional Development Banks

The World Bank and the regional development banks for Latin America, Asia, Africa, and the former Soviet Union and Eastern Europe are excellent examples of the pervasive need for environmental governance structures across functional divides. The multilateral development banks have encountered environmental issues first and foremost as impediments to carrying out their institutional mandates—lending money for development-related activities. Unlike the multilateral agreements discussed above that are designed to confront environmental problems, environmental concerns in this context present themselves as something of an unwelcome burden, or at a minimum a competing policy concern.

This setting has nonetheless been an occasion for addressing issues of environmental quality through the establishment of rules and good-practice standards. For example, the World Bank has adopted requirements in such areas as environmental assessment, forest policy, and human-rights-related policies such as forced resettlement. The structural difference from the multilateral agreements discussed above is that these standards are adopted by the international institution and addressed to its own practices; by contrast, the typical multilateral environmental regime establishes requirements for states parties, and an international organization is more frequently an institutional setting for facilitating the regime’s goals. Although not addressed directly to states, standards established by multilateral development banks (MDBs) to apply to their own practices may nonetheless influence expectations in other settings, such as multilateral environmental agreements, by establishing benchmarks of good practice in such areas as pest management.

The vigor of requirements adopted by the MDBs has been enhanced by the creation of an Inspection Panel at the World Bank and analogous mechanisms at the regional banks. Pursuant to resolutions of its Board of Executive Directors, private parties in borrowing countries that have been or may be adversely

<sup>5</sup> See generally David A. Wirth, “Reexamining Decision-Making Processes in International Environmental Law,” *Iowa Law Review* 79 (1994): 769–802.

affected by the World Bank's operations—presumably the intended beneficiaries of those operations—can petition this institutional mechanism to investigate and report on the situation by reference to the Bank's own standards. This major development was the first instance in which any multilateral institution has submitted the adequacy of its internal operations to external review. Perhaps even more importantly in the long term, the Inspection Panel became an entry point through which nonstate actors such as citizens' organizations could enforce public rights in the international legal system, which does not even acknowledge their existence.

## World Trade Organization

The WTO, like the development banks, is an organization in which environmental concerns appear in an unusual structural setting. GATT/WTO rules establish tests designed to prevent the abuse of national regulatory powers as protectionist trade barriers, as distinguished from legitimate measures for protecting public health and the environment. The WTO dispute settlement process provides a forum in which those rules can be applied, lifting trade disputes above the national and parochial level and into a rule-of-law setting in which states are obliged to defend their actions by reference to principled argument. Accordingly, in the trade regime environmental and public health appear as potential nontariff barriers to trade, and the remedial public policy rationale behind them is in effect a defense by a respondent state to a trade-based attack. Trade rules are designed to define the outer limits of an acceptable exercise of a state's regulatory authority or police jurisdiction, and do not mandate its application; rather, they proscribe the exercise of a state's authority in this area in a manner that is inconsistent with the rules.

In practice, these considerations arise in two conceptually distinct but related structural contexts. The first are the basic nondiscrimination requirements originating from the GATT as adopted in 1947. In this setting, measures that are otherwise discriminatory may be justified by environmental and public health concerns provided certain tests are met. The second is a suite of Uruguay Round agreements adopted in 1994 designed to discipline nondiscriminatory measures, most notably the WTO Agreement on the Application of Sanitary and Phytosanitary Measures, which governs certain public health and environmental measures such as food safety regulations by reference to scientific tests. The application of these screens in disputes concerning imports of shrimp harvested in ways that harm endangered sea turtles, a prohibition on hormones in beef, and importation of genetically modified foods and crops have as a practical matter required the WTO as an institution—and particularly its Appellate Body as the final word in the dispute settlement



process—to face daunting fundamental questions about the procedure for adopting, and the content of, environmental and public health regulations. Consequently, WTO dispute settlement jurisprudence, accreting over time, has somewhat ironically become a principal source of both international and domestic good-practice standards and principled approaches to environmental and public health regulation on questions such as the appropriate treatment of policy-relevant science which may be uncertain or contested.

## NON-UN ORGANIZATIONS

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International institutions outside the UN system have also addressed the environment, frequently in a manner that reflects the characteristics of the grouping of states members of the organization. Even here, as with UN-related bodies, neat distinctions are often elusive.

### Organisation for Economic Co-operation and Development

Historically the OECD has been one of the principal intergovernmental organizations active in the environmental area, chiefly through its ministerial-level Environmental Policy Committee, which was established in 1970. The OECD, created by multilateral treaty in 1960, consists of thirty member states, most of which have industrialized market-oriented economies. The Secretariat of the Organisation, whose primary mandate is to promote economic growth and trade, is located in Paris. The OECD serves as an arena for multilateral discussion of informational or analytical studies, the negotiation of recommendations that contain nonbinding undertakings for those OECD members that agree to them, and the adoption of decisions that are binding on member states that accept them.

Among other subject matter areas, the OECD has provided a forum for the adoption of numerous recommendations on transboundary pollution, environmental impact assessment, the polluter-pays principle, and integrated pollution prevention and control. Although perhaps less numerous than nonbinding recommendations in the environmental area, binding decisions have been adopted on such matters as exports of hazardous wastes. Coordinating national policies and reconciling rational regulatory approaches for toxic substances have been particularly active areas, primarily through the Chemicals Group. Addressed directly to private

entities and adopted in the form of a recommendation, the OECD Guidelines for Multinational Enterprises contains a chapter addressing the environment.

The choice of forum for, and form of, multilateral cooperation for undertaking environmental initiatives such as exchanging toxicity testing data is revealing. First, these efforts have taken place within the thirty-member OECD, an international organization that is not part of the UN system, which is generally perceived as representing the interests of wealthier countries. Although developing countries may be invited to participate in OECD work, as in the case of certain of the OECD's efforts on mutual acceptance of data and rules for international investment, there is at least the perception of the strategic value of harmonization among a small, like-minded group with similar interests before issues move to universal forums such as the UN.

## Arctic Council

Unique among international institutions addressed in this chapter, and in contradistinction to the legally binding regime for the south polar region, the Arctic Council is not established by a binding, constitutive, multilateral agreement. Rather, from a legal point of view it is an informal association of Arctic rim states—Canada, Denmark (including Greenland and the Faroe Islands), Finland, Iceland, Norway, Russia, Sweden, and the United States—whose constituent instrument is the 1996 nonbinding Declaration on the Establishment of the Arctic Council, adopted in Ottawa. Its routine output is therefore primarily informal and nonbinding, although it has also served as a forum for negotiating binding agreements such as the 2011 Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic. The full Council meets twice yearly, with interim activities on an ongoing basis, and the position of Chair rotates biannually among the Council states. In 2011 a secretariat was established, located in Tromsø, Norway.

Easily accommodated within this flexible structure, the Arctic Council includes established participation by six identified nonstate bodies as permanent participants representing indigenous peoples of the area. Other states and international organizations, such as China, Germany, and UNEP, have the status of permanent observers. Among its efforts, the Council has taken up regional global concerns with an impact on the Arctic environment and economy such as loss of sea ice, accelerated Arctic warming due to climate change, permafrost melt, thawing of the tundra, mercury and other persistent pollutants in the food chain, and ocean acidification, fisheries management, biodiversity preservation, and public health.

## COOPERATIVE PROGRAMS OF EXISTING ORGANIZATIONS

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The demand for responses to environmental and public health problems transcends the functional division of expertise characteristic of much international governance and many international organizations. Although many efforts have taken place within existing institutions, there have also been particular fields in which cooperation among international organizations becomes desirable or essential. Not surprisingly, hybrid undertakings based on cooperation between international institutions, generally in response to identifiable needs, have also characterized international environmental governance. The examples identified in this section are representative, and do not purport to exhaust the field.

### Intergovernmental Panel on Climate Change

When the issue of climate change began to attract heightened public attention in the late 1980s, the international community's first response was to convene a high-level scientific panel, the Intergovernmental Panel on Climate Change (IPCC). The IPCC, which met for the first time in November 1988, was created under the auspices of UNEP and the World Meteorological Organization (WMO) with a mandate to study the climate change issue primarily from a scientific perspective. Models for assembling advisory groups of prominent scientists from multiple countries under international auspices were familiar from previous multilateral activity on environmental challenges such as stratospheric ozone depletion, but the scale and structure of the IPCC were unprecedented.

All members of UNEP and WMO, in effect all UN member states, are eligible to participate in the IPCC's work. The IPCC's work product can be understood as a massive risk assessment undertaken by an international body of scientists from everywhere on the globe to advise the international community as to the nature and extent of threats from global climate warming. Thousands of scientists from all over the world participate voluntarily in IPCC activities. The IPCC's work, although repeatedly challenged, has withstood outside scientific scrutiny, for example by the US National Academy of Sciences in 2001 after the United States had indicated its intention not to ratify the Kyoto Protocol. The IPCC was awarded the Nobel Peace Prize in 2007.

## Global Environment Facility

The Global Environment Facility (GEF) was established in 1991 as a \$1 billion pilot program in the World Bank to provide funding for environmentally beneficial activities. Together with the World Bank, UNEP and the UN Development Programme were the initial partners in implementing GEF projects. Restructured after the 1992 Earth Summit, the GEF is now an independent, freestanding institution administering three trust funds. The GEF Assembly is the plenary body in which representatives of all member countries participate, meeting every three to four years, most recently in 2010.

The GEF Council, consisting of thirty-two members distributed evenly among developing countries on the one hand and developed countries and economies in transition on the other, serves as the executive body, meeting semiannually. The Secretariat is housed in Washington, and the World Bank serves as Trustee of the GEF Trust Fund and provides administrative services. The GEF provides funding in a number of identified areas, such as preservation of biological diversity, and serves as the financial mechanism for a number of major environmental multilateral conventions, including the UN Framework Convention on Climate Change. The governance structure of the GEF appears to have struck something of a balance in responding to concerns from developing countries about the delivery of funds through donor-dominated institutions, such as the World Bank.

## FREESTANDING MULTILATERAL ENVIRONMENTAL REGIMES

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Although there are prior examples, since the late 1970s or early 1980s there has been a consistent, identifiable innovation in environmental governance in the form of freestanding multilateral environmental regimes not formally tied to an international organization or institution. While international organizations are still important as a setting for rulemaking—both “hard” or binding requirements or “soft” or non-binding good practice standards and recommendations—a model of a freestanding regime devoted to a particular problem has emerged. Many of these agreements are negotiated under the auspices of an international institution such as UNEP, and at least as a formal matter then sent off to an independent existence on their own.<sup>6</sup>

<sup>6</sup> See generally Robin R. Churchill and Geir Ulfstein, “Autonomous Institutional Arrangements in Multilateral Environmental Agreements: A Little-Noticed Phenomenon in International Law,” *American Journal of International Law* 94 (2000): 623–59.

Significantly, this relatively new institutional phenomenon can be identified by a single identifying feature: the agreements concerned do not create an international organization or anything that could be plausibly identified as an international institution in the traditional sense. Rather, there are periodic, typically annual, meetings of the parties to take further action as may be called for to assure that the agreement broadly understood as an ongoing, organic architecture is responsive to new developments—often scientific—or a need to extend its reach. Typically, these agreements are serviced by their own secretariats, which report to the parties to the agreement as a group. Still, the distinctions are far from crisp. Many of these agreements are still loosely tied to the international institution under whose purview they were originally created. And a significant number have ties to other international institutions, most notably the GEF, which serves as the funding mechanism for several.

In the typical model, a binding agreement, often identified as a “framework” convention, serves as the anchor for the regime. Although not legally required, the expectation has evolved that substantive regulatory requirements will be included in ancillary protocols. The implicit assumption is that the regime is built in a step-wise fashion, beginning with the relatively more procedural and structural provisions of the framework agreement, to be followed by protocols that contain more substantive obligations. Ordinarily, in the “garden variety” situation, the prototype modern framework—sometimes described as an “umbrella”—convention includes the following components:

- Procedural requirements, such as data exchange and reporting, designed in part to facilitate a better understanding of the problem, as well as typically to serve as the principal vehicle for verifying implementation of the agreement.
- Provision for adoption of ancillary protocols, along with rules for adoption and amendment of both the convention itself and any protocols. Ordinarily the convention clarifies the formal legal relationship between the convention and ancillary protocols.
- A periodic, typically annual, meeting, frequently identified as a “conference of the parties.” Meetings of parties to any protocols ordinarily take place at the same time as the conference of the parties to the convention, with nonparties to protocols nonetheless present as observers.
- The establishment of subsidiary bodies. The Framework Convention on Climate Change has two institutional entities subordinate to the conference of the parties: a Subsidiary Body for Scientific and Technological Advice and a Subsidiary Body for Implementation.
- Requirements for periodic review of developments in science, policy, and procedural issues, typically addressed at the conference of parties. Outputs range from decisions—generally accepted to be legally nonbinding in character—amendments,

declarations, or a variety of other procedural formats. Subject matter can also vary widely, including the creation of new subsidiary bodies and the adoption of procedures on such issues as noncompliance.

- Funding mechanisms, which may be freestanding entities established by and reporting to the parties to the convention or protocol in question. Existing institutions, most notably the GEF, are generally available as a default mechanism.
- Secretariat services, which are sometimes constituted as freestanding entities under the agreement in question, or, alternatively, provided by the international organization under whose auspices the agreement was negotiated.
- Final clauses containing procedures for amendment of convention and protocols, dispute settlement, signature, ratification, accession, and entry into force, as is typical for other multilateral conventions.

This model did not emerge overnight, but instead evolved over time. The ECE's 1979 LRTAP was clearly intended to serve as a framework for further cooperation, but does not contain a number of the features identified above, most notably an authorization for the adoption of subsequent protocols and rules for doing so. Nonetheless, that convention is now the keystone of an identifiable regime for addressing transboundary pollution in the ECE region, with eight protocols governing air pollutants such as sulfur compounds which are precursors to acid rain, nitrogen oxides, and toxic heavy metals.

When states then came together under UNEP auspices to reduce threats to the stratospheric ozone layer, they made an explicit decision to undertake the now-familiar two-component process, including legally distinct instruments in the form of a framework multilateral convention and substantive ancillary protocols. Negotiations on a protocol to control chlorofluorocarbons (CFCs), the principal chemicals causing loss of stratospheric ozone, proceeded simultaneously with deliberations on the convention until early 1985. Moreover, for a considerable portion of the negotiations when the two instruments proceeded in tandem, a number of countries including the United States called for a mandatory CFC protocol to which all parties to the convention would have to adhere. When negotiations on the CFC protocol broke down, the Vienna Convention on the Protection of the Ozone Layer alone was adopted. Renegotiation of the protocol after a scheduled one-year "cooling off" period coincided with a dramatic upsurge in public concern about the Antarctic ozone hole, which broke the deadlock and facilitated adoption of the Montreal Protocol in September 1987.

The convention-plus-protocols architecture is not in any sense mandated by international law, but has nonetheless become ossified as received wisdom about environmental governance. Moreover, as demonstrated by the ozone precedent, there is no requirement, legal or otherwise, that conclusion of the convention must precede the negotiation and adoption of any substantive protocols. This expectation nonetheless congealed quickly, as demonstrated by subsequent negotiations on the Framework Convention on Climate Change, in which the debate over whether

to include substantive emission reduction requirements in the convention became quite acrimonious.<sup>7</sup>

This model can accommodate many innovative governance approaches. Protocols range across diverse subject matter and permit considerable flexibility in subsequent implementation. For instance, the first protocol to the UN Convention on Biological Diversity, the Cartagena Protocol on Biosafety, governs trade in genetically modified food and crops—not necessarily the most pressing issue threatening biodiversity that could be imagined. Recently, protocols on liability have been adopted under a number of the major multilateral agreements.<sup>8</sup> In an innovation that is even closer to majority voting than MARPOL, the Montreal Protocol on Substances that Deplete the Ozone Layer rejects the customary rule of consensus by explicitly stating that a two-thirds majority may adopt “adjustments” to the agreement’s reduction schedule, which then are binding on all parties to the original instrument without the need for subsequent assent.

One of the principal vehicles for extending and modifying these freestanding treaty regimes is a decision of the parties to the agreement acting as a group, ordinarily at one of their periodic meetings. This tool is not without legal and policy ambiguity, and the extent to which actions can be taken by nonbinding decisions as opposed to legally binding measures such as amendments to a protocol or the parent convention may be unclear, a situation which may in turn have domestic legal consequences. For example, the Stockholm Convention on Persistent Organic Pollutants contains a controversial provision that allows extension of the agreement, which essentially bans substances covered by it, to new chemicals by decision rather than a full-blown amendment.<sup>9</sup>

In addition to the Vienna Convention/Montreal Protocol regime for stratospheric ozone and the Framework Convention on Climate Change/Kyoto Protocol superstructure addressing global warming, the framework convention-plus-protocols

<sup>7</sup> For a negotiating history of the Framework Convention on Climate Change, see Daniel Bodansky, “The United Nations Framework Convention on Climate Change: A Commentary,” *Yale Journal of International Law* 18 (1993): 451–558. The Paris Agreement (<https://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf>), adopted by the twenty-first conference of the parties to the Framework Convention on December 12, 2015, is a protocol to the Convention in everything but name, the term “protocol” having been recognized as a serious impediment to acceptance of the Agreement by the United States. See David A. Wirth, “Cracking the American Climate Negotiators’ Hidden Code: United States Law and the Paris Agreement,” *Climate Law* 6 (2016): 152–70.

<sup>8</sup> See, e.g., Günther Doeker and Thomas Gehring, “Liability for Environmental Damage,” in *The Effectiveness of International Environmental Agreements: Survey of Existing Legal Instruments*, ed. Peter H. Sand (1992), 392–435; Noah Sachs, “Beyond the Liability Wall: Strengthening Tort Remedies in International Environmental Law,” *University of California, Los Angeles Law Review* 55 (2008): 837–904; Francisco Orrego Vicuna, “Responsibility and Liability for Environmental Damage Under International Law: Issues and Trends,” *Georgia International Environmental Law Review* 10 (1998): 279–308.

<sup>9</sup> See, e.g., Pep Fuller and Thomas W. McGarrity, “Beyond the Dirty Dozen: The Bush Administration’s Cautious Approach to Listing New Persistent Organic Pollutants and the Future of the Stockholm Convention,” *William & Mary Environmental Law & Policy Review* 28 (2003): 1–34. See also *Natural Resources Defense Council v Environmental Protection Agency*, 464 F3d 1 (DC Cir. 2006) (domestic applicability of decisions adopted pursuant to Montreal Protocol).

model has been adopted in a number of other global agreements, by and large negotiated under UNEP auspices, including the UN Convention on Biodiversity.

Regional agreements, most notably in the ECE, also employ this model. In addition to LRTAP, a good example is the Aarhus Convention on Public Participation and Access to Information, to which a Protocol on Pollutant Release and Transfer Registers has been adopted. Other treaty regimes addressing environmental issues in whole or part that can be characterized as less than universally inclusive include the 1959 Antarctic Treaty, to which is appended a 1992 Environmental Protocol, and the 1946 International Convention on the Regulation of Whaling.

Although the model of an organic treaty establishing a comprehensive, self-contained regime is not formally an international organization, in practice the distinction frequently is not so clear. For example, a number of agreements, most notably the ECE regional conventions, rely on secretariats of existing organizations to supply those services. Even those that have technically freestanding secretariats often retain ties to the international institution under which they were negotiated. These regimes, moreover, are frequently treated as a practical matter as if they had legal personality. For example, the conventions for which the GEF serves as the funding mechanism provide advice to that institution, more or less as if the conventions themselves were formally constituted as independent entities under international law. While the environmental-treaty-as-governance-structure is formally an alternative approach to rulemaking in formally constituted international organization, the distinction is blurry and perhaps ultimately without much practical significance.

## **BILATERAL AND REGIONAL AGREEMENTS**

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Bilateral and regional agreements also present their own embellishments to the structural treatment of the environment as an international governance matter. While there are thousands of bilateral and regional agreements that address the environment outside the UN system, the examples in this section have unusual or unique attributes that further highlight the range and diversity of the challenges presented by international environmental law, policy, and governance.

### **Bilateral Investment Treaties and NAFTA Chapter 11**

Beginning in the 1970s, first European countries and then the United States began to negotiate bilateral investment treaties (BITs) that were intended to resolve both the substantive and procedural weaknesses in the customary law governing foreign investment by (1) establishing clearer, treaty-based tests for actionable measures



taken against foreign investors; and (2) creating dispute settlement mechanisms that could be initiated by private party investors directly against the host state, eliminating the involvement of the government of the home state. Although some BITs anticipated dispute settlement by freestanding arbitral tribunals such as those governed by the UN Commission on International Trade Law's (UNCITRAL) rules, many referred investor-state disputes to the International Centre for Settlement of Investment Disputes (ICSID). The trilateral North American Free Trade Agreement (NAFTA) was the first free-trade agreement to incorporate rules on investment, modeled on those in BITs, in its Chapter 11.

Although the expectation was that Chapter 11 would apply primarily to Mexico, the first dispute investment dispute was initiated by a US investor against Canada over its effective prohibition of a fuel additive.<sup>10</sup> Canada settled and removed the measure, triggering a flood of similar challenges to environmental measures as violations of NAFTA's investment rules. A number of these were addressed through ICSID, where a number of procedural limitations became apparent: (1) the absence of a mechanism for assuring continuity in jurisprudence, as there is no rule of binding precedent (*stare decisis*) and awards of arbitral tribunals as a matter of principle have no precedential force; (2) the absence of measures for public participation either in the form of written submissions or access to oral hearings; and (3) the absence of an appellate mechanism to correct errors and resolve disputed questions of law. As a result of concerns over the potential for attacks on environmental measures as inconsistent with investment rules, newly negotiated BITS increasingly include specific protections for environmental measures, and the US model BIT<sup>11</sup> now includes an entire article that at least partially clarifies this issue.

## North American Commission for Environmental Cooperation

In response to highly public and vociferous concerns over the environmental effects of the trilateral NAFTA, President Clinton, declining to renegotiate the text of NAFTA proper, advocated the adoption of new "side agreements" on environment and labor. The resulting North American Agreement on Environmental Cooperation (NAAEC) established a trilateral Commission for Environmental Cooperation (CEC) headed by a council consisting of the environment ministers of the three NAFTA states. The CEC is serviced by a professional Secretariat in Montreal and advised by a committee of Canadian, Mexican, and US nationals appointed in their personal capacities.

<sup>10</sup> See Julie A. Soloway, "Environmental Trade Barriers Under NAFTA: The MMT Fuel Additives Controversy," *Minnesota Journal of Global Trade* 8 (1999): 55-96; Todd Weiler, "The Ethyl Arbitration: First of its Kind and a Harbinger of Things to Come," *American Review of International Arbitration* 11 (2000): 187-202.

<sup>11</sup> <http://www.ustr.gov/sites/default/files/BIT%20text%20for%20ACIEP%20Meeting.pdf>.

According to policymakers, the principal environmental concern was not a divergence in national standards among the three NAFTA countries, but, rather, the need to provide effective enforcement mechanisms for fully implementing existing national laws. The NAAEC consequently assigned the CEC Secretariat the responsibility to receive and process citizen submissions alleging that one of the NAFTA parties has failed effectively to enforce its domestic law, as specified in Articles 14 and 15 of the Agreement. The CEC citizen submission process, a major innovation in public international law in providing a complaint mechanism that can be initiated by private parties, begins when a nongovernmental organization or individual lodges a submission with the CEC Secretariat alleging that one of the three NAFTA governments “is failing to effectively enforce its environmental law.”

The Secretariat first conducts an initial consideration of the admissibility of the submission, determines whether the submission warrants developing a factual record, and transmits its recommendation to the CEC Council. The Council, by two-thirds vote, then instructs the Secretariat whether to prepare a factual record. After the Secretariat prepares a factual record the Council, by two-thirds vote, decides whether to make the factual record public. As at the time of writing, there have been more than eighty citizen submissions resulting in seventeen factual records, of which only one was prepared in response to a submission concerning the United States.<sup>12</sup> The citizen submission process has been replicated with some modifications in other regional and bilateral trade agreements to which the United States is a party, most notably the Dominican Republic-Central America Free Trade Agreement and the Trans-Pacific Partnership.<sup>13</sup>

## INTERNATIONAL ENVIRONMENTAL INSTITUTIONAL AND REGULATORY TOOLBOX

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As demonstrated by this examination, the number and variety of international institutional settings available to address substantive environmental goals is enormous. Similarly, in response to the challenges posed by the need for effective environmental governance, the range of available legal and policy instruments is similarly

<sup>12</sup> For a summary of citizen submissions on enforcement matters to date and a link to the docket in each, see <http://cectracker.nma.ca>. The Boundary Waters Treaty of 1909, January 11, 1909, United States–Great Britain, 36 Stat. 2448, is an example of a treaty creating a bilateral international organization that has had great influence on environmental issues, the International Joint Commission.

<sup>13</sup> Trans-Pacific Partnership: <https://ustr.gov/tpp/>.

diverse. These two attributes—institutional setting and regulatory design—are in fact deeply intertwined.<sup>14</sup> Based on the previous analysis, one can identify any number of precedents in the form of both institutional and policy options available in response to environmental challenges:

- multilateral, regional, and bilateral agreements establishing binding obligations for states
- adoption of protocols by freestanding regimes establishing binding obligations for states (e.g., eight protocols adopted under LRTAP)
- binding actions taken by existing organizations establishing normative standards for states (e.g., OECD decisions)
- nonbinding actions taken by institutions not constituted by multilateral agreement (e.g., Arctic Council)
- nonbinding actions taken by existing organizations establishing good-practice standards for states or intended to harmonize state practice (e.g., OECD recommendations)
- decisions taken pursuant to the authority of framework conventions by freestanding regimes (e.g., COP decisions, typically nonbinding)
- decisions taken pursuant to the authority of protocols adopted under authority of freestanding regimes (e.g., MOP decisions, typically nonbinding, addressed only to parties to protocol)
- nonconsensus decision-making procedures (e.g., MARPOL 73/78, Montreal Protocol)
- nonbinding actions taken by existing organizations establishing good-practice standards directly addressed to nonstate actors (e.g., OECD Guidelines for Multinational Enterprises)
- nonbinding standards intended to serve as models for binding substantive agreements (e.g., UNEP Goals and Principles of Environmental Impact Assessment/ECE Convention on Transboundary Environmental Impact Assessment)
- good-practice standards transformed into binding obligations in particular contexts (e.g., World Bank Operational Standards incorporated into binding loan agreements)

<sup>14</sup> See, e.g., Barbara Koremenos, Charles Lipson, and Duncan Snidal, “The Rational Design of International Institutions,” *International Organization* 55 (2001): 761–99. With respect to effectiveness, see Edith Brown Weiss, and Harold K. Jacobson (eds.), *Engaging Countries: Strengthening Compliance with International Environmental Accords* (Cambridge, MA: MIT Press, 1998); David G. Victor, Kal Raustiala, and Eugene B. Skolnikoff, *The Implementation and Effectiveness of International Environmental Commitments: Theory and Practice* (Cambridge, MA: MIT Press, 1998); Durwood Zaelke, Donald Kaniaru, and Eva Kružíková (eds.), *Making Law Work: Environmental Compliance and Sustainable Development*, 2 vols. (London: Cameron May, 2005).

- binding obligations applied in state-to-state dispute resolution (e.g., WTO dispute settlement proceedings)
- binding obligations applied in bilateral investor–state dispute settlement mechanisms (e.g., NAFTA Chapter 11, BITs)
- institutional requirements applied at civil society initiative to international organizations (e.g., World Bank, regional development bank Inspection Panel mechanisms)
- international obligations applied at civil society initiative to states in adjudicatory mode (e.g., NAAEC citizen complaint mechanism).

These factors operate along a number of axes in multiple dimensions simultaneously. One attribute is institutional structure, which can range from among the most formally constituted international organizations to freestanding multilateral environmental agreements to an informal assemblage of states like the Arctic Council. A setting that lacks any capacity to adopt binding measures would seem at first blush to be poorly positioned to effect positive environmental change. But it may be that the situation is not yet ripe for legally binding commitments, and trying to force them prematurely could be counterproductive. If legal commitment is necessary, there is always the possibility of adopting a freestanding treaty, even under the auspices of the most loosely structured institutional arrangement.

While it would be tempting to make distinctions between actions taken in the context of formally structured international organizations and freestanding treaty regimes, it is not clear that there is much of a distinction in outcomes. Instead, actual practice appears to range along a continuum. Choices such as the UN Economic Commission for Europe as a vehicle for negotiating regional air pollution agreements appear to be a product of time and place, with the availability of an existing international organization as a forum in that particular setting enhancing the likelihood of a successful outcome by comparison with the possibility of starting from scratch.

A second feature of institutional setting concerns the breadth of subject matter coverage, as contrasted with functional compartmentalization. International environmental governance has frequently been criticized for its fragmented character, and invites the inference of a lack of multilateral coherence. Even the secretariats of multilateral environmental agreements are flung literally over the globe, at least potentially exacerbating the situation. As a consequence, several influential actors have made serious proposals advocating the creation of a new international organization characterized by broader subject matter coverage and greater effectiveness, such as the creation of an executive body with enhanced powers.<sup>15</sup>

<sup>15</sup> e.g., Steve Charnovitz, "A World Environment Organization," *Columbia Journal of Environmental Law* 27 (2002): 323–62; Daniel C. Esty and Maria Ivanova, "Making International Environmental Efforts Work: The Case for a Global Environmental Organization," Yale Center for Environmental Law

Third, decision-making procedures, whether based on consensus or rules that allow actions to be taken in situations in which some states may not be entirely in agreement, can affect the efficacy of a regime. While nonconsensus rules might seem to overcome the possibility of least-common-denominator results, it is not necessarily productive to bind states without their consent. Significantly, although states in the Montreal Protocol regime have the option to adopt binding revisions through procedures that approach majority voting, that power has been sparingly used. Because of the strong political will behind the instrument, the decision to add new substances to the regime through a formal, consensus amendment process may very well have contributed to the efficacy of what is generally regarded as the most successful of all international environmental regimes.

And, of course, the question of choice of instrument, whether binding or non-binding, is a crucial one. But there again, one must be cautious in reflexively assuming that legally binding rules are innately superior. In contrast to a “hard” international agreement, a nonbinding “soft” instrument may allow states to gain experience with more ambitious, aspirational goals in a milieu that is perceived as less risky. By contrast, under such circumstances states might commit to binding or “hard” treaty obligations only of a modest character, if at all. Alternatively, nonbinding instruments may also be appropriate for circumstances in which consensus is elusive or illusory, while nonetheless supporting more aggressive policy action by those states that are prepared to do so. Nonbinding instruments may be attractive alternatives to a downward spiral toward a least common denominator, a result characteristic of many multilateral efforts.<sup>16</sup>

## CONCLUSION

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The wide variety and great flexibility of both institutional structures and substantive regulatory tools available to international policymakers in the field of the

and Policy Working Paper 2/1 (May 2001), <http://www.yale.edu/gegdialogue>; Nils Meyer-Ohlendorf and Markus Knigge, “A United Nations Environment Organization,” in *Global Environmental Governance: Perspectives on the Current Debate*, ed. Lydia Swart and Estelle Perry (New York: Center for UN Reform Education, 2007), 124–41 (describing EU initiative in UN to “upgrade” UNEP); C. Ford Runge et al., *Freer Trade, Protected Environment: Balancing Trade Liberalization and Environmental Interests* (New York: Council on Foreign Relations Press, 1994).

<sup>16</sup> See, e.g., Dinah L. Shelton (ed.), *Commitment and Compliance: The Role of Non-Binding Norms in the International Legal System* (Oxford: Oxford University Press, 2000); Edith Brown Weiss (ed.), *International Compliance with Nonbinding Accords* (Washington: American Society of International Law, 1997).

environment is perhaps unique in the field of international organizations. In principle, this attribute should enable a reasonably precise fit between substantive environmental challenges on the one hand and international governance responses on the other. It would be intellectually appealing to assume that form can be neatly matched to function, but it is difficult to say that that is the case in actual practice. Rather, many choices in the field appear to be fortuitous, based on criteria unique to the situation presented. And it is not at all clear that that is an undesirable situation, given the number and magnitude of the challenges to be surmounted in the ongoing search for effective international environmental governance.