Compliance with International Environmental Agreements

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The United Nations Conference on the Human Environment, held in Stockholm in 1972, set off an unprecedented development of new international environmental treaties. Before 1972 only a dozen international treaties with relevance to the environment were in force; twenty-five years later more than a thousand such instruments could be counted.

With the intensified use of international treaties as a means to combat environmental degradation, concerns have arisen regarding the compliance of states with the commitments to which they agreed. Even within relatively strong regional organizations such as the European Union, compliance problems are more and more overshadowing successes in the adoption of new instruments. In a hearing some years ago by the British House of Lords on the subject, a member of the European Parliament even warned that "we have now reached the point in the EC where, if we do not tackle implementation and enforcement properly, there seems very little point in producing new environmental law."1

In recent decades new approaches to the drafting, adoption, implementation, operation, and enforcement of international environmental treaties have been attempted in an effort to improve the compliance of states with international environmental treaties. This chapter will give a brief overview of the problems experienced with treaty compliance and the solutions sought, both in theory and in practice. The findings of this chapter will be related to three international treaty regimes, the Montreal Protocol on Substances That Deplete the Ozone Layer, the United Nations Framework Convention on Climate Change (FCCC), and the EU environmental regime. In addition, other examples of environmental treaties will be given as well.

First, we will discuss the theory of compliance as it has been developed in recent literature and in practice.2 Second, we will give an overview of the sources of compliance and noncompliance. Then we will examine the methods developed to improve compliance with international environmental treaties. We will end with some concluding remarks.

Theory of Compliance

The term compliance is often not used in a consistent way, but confused with related terminology such as implementation, effectiveness, or even
enforcement. To avoid unnecessary confusion, however, one should be careful in using these terms. Implementation, compliance, enforcement, and effectiveness refer to different aspects of the process of achieving international political and legal cooperation.

Implementation refers to the specific actions (including legislative, organizational, and practical actions) that states take to make international treaties operative in their national legal system. Implementation therefore establishes the link between the national legal system and the international obligations. The aim of establishing this link should be compliance. Compliance is generally defined as the extent to which the behavior of a state, party to an international treaty, actually conforms to the conditions set out in this treaty. Some authors make a distinction between compliance with the treaty's explicit rules and compliance with the treaty's objective. It is, however, difficult to assess compliance with the "spirit" of an agreement, since this evaluation can be quite subjective. The third term, enforcement, indicates the methods that are available to force states to implement but also to comply with treaty obligations. Where compliance and implementation concern the actions of the states themselves, effectiveness is more concerned with, as the term indicates, the effect of the treaty as a whole. Effectiveness addresses the question whether treaties that are correctly complied with actually achieve the objectives stated in the treaty, or whether the treaty actually helped to reach the environmental goal for which it was designed.

The terms compliance and effectiveness are often used interchangeably, but in fact have very distinct meanings. Compliance is in most cases a condition for effectiveness, if by effectiveness we understand the reaching of the treaty's goals. If a treaty is complied with, however, it does not automatically mean that it is effective in reaching the environmental goal for which it was originally designed. Effectiveness also depends on the actual treaty design, the instruments and goals contained in the treaty, as well as other external factors, such as a changing political situation or even changing environmental conditions. An example of this could be the Montreal Protocol: compliance with that document can be perfect, but the protocol itself can be ineffective in reducing harm to the ozone layer. Hence, compliance is only a proxy for effectiveness: greater compliance will usually lead to environmental improvement, but whether this is actually the case will to a large extent depend upon the contents of the treaty concerned. One could even imagine a treaty that is so badly drafted that noncompliance would even contribute to its effectiveness. This ironic result is reached in treaties that on paper protect the environment (or potential victims) but that in fact protect industrial operators, for example, by introducing financial caps on their liability. One could argue that potential victims would be better off in cases of noncompliance, but this is obviously true only in those cases where special interests (and not primarily environmental concerns) dictated the contents of the treaty.

We will concentrate here on the issue of compliance as a requirement for an effective treaty. The issue of compliance is receiving increasing attention in recent practice and scholarly writing. This increasing attention has
led to the development of a new approach to the compliance issue. The traditional view of compliance was very much connected to the principle of sovereignty of states. According to this principle states are sovereign actors in the international arena, meaning that they are free to act as they find necessary, unrestricted by any external authority or rules. Starting from this principle of sovereignty one tended to believe that governments therefore accepted only those international treaties that were in their own interest. A breach of these treaties was thus not seen as likely. If a state was in breach of its treaty obligations, it was usually considered to be intentional. Enforcement measures were thus often limited and considered to be severe actions. Examples of these enforcement measures are the state complaints procedures, where states can file an official complaint against the violating state, or trade sanctions. Because of the gravity of these sanctions, however, they are hardly ever applied in practice. Even in the European context direct complaints of one state against another are still highly exceptional. 4

In recent scholarly writings this traditional view of compliance problems is now being abandoned. This change of view goes hand in hand with the new approach to sovereignty. States are no longer seen as completely sovereign entities but have to accept limitations on their originally sovereign rights, for the benefit of the environment, future generations, or the international community as a whole. 5 The international community is increasingly organized in regimes. 6 These regimes consist of a framework of a relatively well developed set of rules and unwritten norms concerning a specific subject matter. The development of regimes can be placed between the traditional concept of sovereignty, leaving the states unbound, and a comprehensive world order, placing the states within a new world governance. Examples of important regimes are the climate change regime, constructed around the FCCC, and the world trade regime, based on the General Agreement on Tariffs and Trade (GATT; now the World Trade Organization, or WTO) rules. With the development of these regimes "sovereignty no longer consists in the freedom of states to act independently, in their perceived self-interest, but in membership in reasonably good standing in the regimes that make up the substance of international life." 7 States' interests are increasingly determined by their membership in, but also good reputation under, these regimes.

The new approach to compliance tries to place compliance problems in this increasingly complicated international context, with a multitude of regimes, interdependent actors, and different interests and obligations. Within this new context many factors can lead countries to conclude treaties. These factors also affect the states' willingness and, more important, their ability, to comply with the obligations. In this more complex perception of compliance, the actors at the international level can no longer be seen as utilitarian decision makers weighing the benefits and costs of compliance. The compliance record of states is influenced by a large number of factors, in which the willful desire to violate rules plays only a minor role. Often it is
rather practical obstacles, outside this will or control of states, that make compliance difficult.

This new concept of compliance also necessitates new solutions to compliance problems. The traditional sanction mechanisms, based on the notion that states intentionally do not comply, have proven largely ineffective. Moreover, some of these are now often unlawful under other international arrangements. Military action is strictly regulated under international law and now only allowed in a limited number of situations. Economic sanctions become increasingly difficult to apply with the development of an increasingly comprehensive international trade regime. Approaches to compliance problems now need to take into account the actual abilities of states to comply, and sanctions for noncompliance need to be developed that fit within the new international regimes. Solutions for compliance problems need to be based more on what is referred to as a “managerial approach” rather than on a more traditional “enforcement approach.”

Sources of Compliance and Noncompliance

Having discussed the theory of compliance in general, we will now address a few factors that may affect compliance with environmental agreements and possible sources of noncompliance.

Country Characteristics

The chances of compliance with international environmental accords will first of all depend to a large extent upon the characteristics of the parties involved in negotiating and adopting international environmental treaties, that is, the states concerned. These country characteristics—but also the relationship between the various states involved in the treaty-negotiating process—will have an impact on the chances of treaty adoption; in addition, they will have a considerable influence on the chances of compliance.

There may be many reasons why states sign treaties but nevertheless do not comply. States may sign an agreement because of international pressure or to serve domestic interests. Domestic interests, however, may also oppose compliance. Hence, it may well be in the states’ interest to sign the agreement but not to comply. Moreover, compliance with international environmental agreements seldom is a black or white situation: states may view most provisions of a treaty in their interest, thus complying with those provisions and violating a few others.

Other factors that may play a role are, for example, the cultural traditions, the political system, and the administrative capacities of the country concerned, as well as economic factors. Also the strength of nongovernmental organizations (NGOs), an issue that we will discuss below, may influence compliance.

An important question is whether a country has a democratic form of government. Many features of democratic governments contribute to
improved implementation and compliance. There may be more transparency and hence easier monitoring by citizens who can bring pressure to improve the implementation record. Also NGOs generally have more freedom to operate in democratic countries. Hence, it could be argued that democracies do have a number of features that may facilitate compliance.

A considerable role can also be played by individuals, such as the heads of state. In many cases the personal enthusiasm of a particular head of state has facilitated compliance, usually during the treaty negotiating process.10

As was indicated above, compliance may also fail because of incapacity. This could be due to the country's lack of administrative capacity to implement the treaty, which in turn may have to do, for example, with the level of education and training of the bureaucrats. The level of administrative capacity is also dependent upon another factor, economic resources. In addition, sometimes compliance with treaties requires investment in technologies that countries with less resources simply lack.

Role of NGOs

We already indicated that the political system of a country can have a bearing on the compliance record because democracies may have a stronger tendency to allow activities of NGOs.11 NGO activity can beneficially influence the compliance record of a country in various ways. In the first place international environmental NGOs may influence international public opinion, shaping the agenda that determines the issues to be dealt with in a treaty. For instance, activities of NGOs contributed, through an increasing pressure on the international community, to the agreement on the Framework Convention on Climate Change, leading to the adoption of the Kyoto Protocol in December 1997. Once a treaty has come into being, NGOs can play a crucial role in ensuring compliance. As watchdogs they can pressure their governments to uphold the key provisions of specific regimes. This so-called bottom-up approach to compliance is increasingly stressed in the literature.12 The role of NGOs here also illustrates that their actions can lead to what is referred to as "compliance as self-interest," or at least nontreaty induced. Through pressure by environmental groups public opinion may be influenced in such a manner that the country views the costs of a potential violation of treaty provisions as prohibitively high.13

Finally, NGOs can also provide information about activities that are addressed in international environmental treaties. Greenpeace, for instance, is an important source of information about ocean dumping.14 Hence, NGO activity may foster transparency both at the negotiating and at the implementation and compliance stages.

These factors generally merit the conclusion that the stronger and more active NGOs are with respect to the issue area of the treaty, the larger the probability of compliance.
Number of States and the “International Environment”

The third aspect relates to the number of states involved in the treaty and the pressure that other signatory states can exercise toward compliance of all. The greater the number of countries that have ratified an accord, and the greater the extent of their implementation and compliance, the greater also the probability will be of compliance by any individual country. Non-compliance would then run counter to international public opinion. There is also a relationship between the area to be regulated in the environmental treaty and the number of countries that can be expected to comply. For instance, the international whaling commission faces a trade-off between, on the one hand, maintaining a moratorium on commercial whaling in a treaty to which fewer countries are willing to be parties, or on the other hand, allowing some commercial whaling to keep a larger number of countries under the scope of the treaty and thus achieving a higher compliance record. Thus, having a large number of countries accept the contents of a treaty comes at a price, and it may lead to a lowering of the standard to be achieved.

The general “international environment” will have an influence on the willingness of a country to engage in the treaty obligations and on the subsequent compliance record as well. This can be analyzed in terms of the “free riding” and “prisoners’ dilemma” problems. Free riding relates to the fact that individual states may hope that others will take the necessary measures to reduce the sources of a transboundary pollution problem, thus “free riding” on their efforts. The game-theoretical prisoners’ dilemma in this context refers to the fact that although mutual compliance may be in the interest of all states in order, for example, to reduce transboundary industrial pollution, the absence of enforcement may lead all parties to believe that they can violate. Because of these problems enforcement was traditionally advocated to guarantee compliance.

Compliance also depends on the distribution of power among nations, which can influence individual states’ compliance strategies. A dominant state, perceiving sufficient benefits from complying, may force compliance by other, weaker states. In those cases compliance does not even require explicit enforcement: the power of the dominant states can lead the weaker ones to comply. Obviously, the division of power between states may change. These changes in the asymmetries of power will also produce changes in the incentives to comply.

Moreover, states sign numerous international treaties. Usually, negotiations concerning treaties and compliance concern situations in which similar states will encounter each other repeatedly in the context of various treaties (often referred to as repeat player games); such multiple encounters may have a beneficial influence on compliance. Thus the fear of free riding can be overcome if the record of compliance is related to potential benefits for states in existing and future international agreements. In other words, states may
comply because future agreements with the same partner states will be possible if they have an acceptable compliance record.

This "international environment" perspective underscores the point made in the "Theory of Compliance" section above that states increasingly belong to various "regimes," which engage them in a repeat player game. Hence, the incentives to comply may emerge from these regimes, reducing the need for formal enforcement of one particular treaty.

Primary Rule System

The most important factor determining the likelihood of compliance is probably the primary rule system. The primary rule system is the actual contents of the treaty that is agreed upon by the parties. This primary rule system defines the behavior that is required by the specific treaty, or in other words, the duties imposed upon the participatory states under the specific treaty. The primary rules are directly related to the activity that the environmental accord is supposed to regulate. Even during the negotiations, when the primary rules are defined, the degree of treaty compliance can be determined to a large extent.

A first important aspect of the design of the primary rule system relates to whether it requires any behavioral change, what the costs of this change will be, and by whom this behavioral change is required. It is easier to achieve compliance if the degree of behavioral change and the costs of this change are low. It is therefore argued that, for instance, compliance with the FCCC might be harder to achieve than compliance with the Montreal Protocol, since more people and industries must make bigger behavioral changes. The Montreal Protocol mainly requires behavioral changes by the producers of a limited number of regulated substances. The goals of the FCCC, however, require large-scale behavioral changes, not only by industry, but also by individuals.

There are a number of cases where treaty rules require no change in behavior of the industry in a specific country. This is often the case when industry is already meeting a specific pollution (for example, emissions) standard. Those industries may even lobby in favor of treaties that will impose on their foreign competitors the standards the industries already have to comply with at the national level.21 In those cases the industries already meeting the specific standard will obviously easily comply, since the treaty in that particular case merely erects a barrier to entry for the foreign competitors.

In some cases the treaties are clearly in the interest of industry for other reasons. One example is the treaties relating to liability for nuclear accidents and oil pollution. On paper these treaties serve the interests of victims, but in fact the contents are often such that the liability of operators is limited (for example, through financial caps). The nuclear liability conventions that originated at the end of the 1950s came into being as a reaction against the growing nuclear industry's fear of unlimited liability. Hence, compliance
with the conventions, which included limited liability of nuclear operators, was relatively high.\textsuperscript{22}

The amount of detail or specificity of a treaty may affect future compliance. States can facilitate their own compliance by negotiating vague and ambiguous rules, for example, if they agree to provisions that seem to be in the environmental interest on paper but are sufficiently vague to allow business as usual. However, primary rules can also often increase compliance through greater specificity. Specific obligations make compliance easier by reducing the uncertainty about what states need to do to comply. Specific treaty language will, moreover, remove the possibility of the excuse of inadvertence and misinterpretation in case of noncompliance. Moreover, the advantage of conventions with relatively precise obligations (such as the Montreal Protocol) is that it is easier to judge whether states do in fact comply. If the obligations are vaguer, assessing implementation and compliance becomes more difficult.

One obvious remedy to inadvertence as a source of noncompliance is, therefore, to draft specific, detailed obligations. These, together with an information campaign, can at least prevent the situation of states justifying noncompliance by the lack of information or clarity with respect to their obligations. A general formulation of the obligations may, however, be unavoidable in some cases simply because political consensus may not support more precision. Article 4(2)(a) of the FCCC is an example of diplomatically formulated "obligations." The article leaves unclear whether there is any specific obligation at all.\textsuperscript{23}

When discussing the country characteristics, we indicated that one source of noncompliance may be the incapacity of states to fulfill the treaty obligations due to a lack of resources or a lack of technological abilities. Hence, when these problems are recognized during the drafting stage, noncompliance may be prevented by designing the primary rules in such a manner that differing capacities are taken into account. This can either take the form of a differentiation of the treaty obligations, related to the various capacities or of a transfer of resources or technologies. This is, again, an example of a managerial approach, where instead of blunt sanctions instruments are developed that take into account the varying capacities and thus prevent noncompliance in the treaty design stage.

The idea of differentiated standards according to a state's capacities is predominant in the FCCC. This convention divides its signatory states in different categories, imposing different obligations for each group. Although all signatory states commit themselves to the general commitments, such as developing national greenhouse gas inventories, only the developed states and states in transition that are listed in Annex I of the FCCC are required to stabilize their emissions. Annex II lists the developed countries that additionally need to provide for financial resources to facilitate compliance by developing countries.\textsuperscript{24} The transfer of funds from developed to developing states can also be observed in other treaties. The Montreal Protocol, for
instance, provides for a framework within which financial support as well as transfer of technology is possible. The EU uses the instrument of structural funds to promote economic and social development of disadvantaged regions within the EU.

One concept used in the area of climate change, which also takes into account differing abilities of states, is joint implementation. When a treaty contains specific obligations (for example, concerning emissions reduction), joint implementation implies that one state can fulfill its emission reduction goals by investing in pollution reduction in a second state, in which the marginal costs of emission reduction are lower.22 Joint implementation is somewhat similar to the economic concept of "tradeable emission rights" to the extent that it causes a flow of "emission rights" to industrial states in exchange for financial aid and technologies to developing countries. Hence, this can also remedy the incapacity problem. Instruments such as financial or technology transfer mechanisms all should facilitate compliance.

The only problem with these inducements is that they are vulnerable to "moral hazard." Moral hazard refers to the fact that the incentives for the prevention of emissions may be diluted if states are subsidized through financial or technological transfers. States may indeed misrepresent their abilities in order to have others pay for their compliance costs. The approach of using differentiated standards and financial and technological transfers lies at the basis of the more comprehensive noncompliance response systems that we will discuss below (see box on the Montreal Protocol as an example of the managerial approach).

Reporting and Information

The likelihood of compliance will also depend upon informational issues. Information plays a role at several stages. First, accurate information on the environmental risks concerned seems important both for the chances of adoption of a treaty on the specific subject and to the likelihood of compliance. Second, information plays a role in increasing the transparency of implementation and compliance records of states through monitoring or reporting systems.

With respect to the first aspect, it is broadly assumed that the more information there is about an environmental issue, the more effective implementation and compliance will be.26 This understanding is rather straightforward: the clearer the activities and risks that are the subject of the treaty are presented, the easier it will be to build political pressure (through, among others, NGOs) via public opinion to induce compliance. One of the reasons that the swift adoption of the Montreal Protocol came as a surprise to the international community was the fact that it was adopted in a time of still important scientific uncertainties surrounding the causes and effects of the changing ozone layer.27 Scientific uncertainties about the causes, existence, and effects of climate change are still influencing to an important extent the negotiations concerning climate change. The scientific reports of the Inter-
governmental Panel on Climate Change play an important role in forming international consensus about the problem. Still, some states and industries persistently deny the existence of a problem altogether.28

With regard to the second aspect, information increases the transparency of implementation and compliance records of states. If it is known that states do not comply, international and domestic groups can take actions aimed at improving a state’s compliance. Whether there is transparency with respect to the compliance record will to a large extent depend upon the complexity of the issue covered by the treaty and upon the democratic character of the complying state. Transparency can lead to public pressure to increase compliance. In this respect one can think of the actions of NGOs to identify noncompliance. These actions toward transparency can increase compliance even without formal sanctions. Transparency is considered to be an almost universal element of compliance management strategy. Indeed, NGOs can provide valuable information (thus increasing transparency) on violations, thereby giving incentives for compliance without a need for formal sanctioning. Also, domestic environmental groups can point at noncompliance by states or multinational corporations, thus increasing the costs of noncompliance.29

Transparency can be achieved through an effective compliance information system that is laid down in the treaty. To a large extent treaties rely on self-reporting by states. As we have already seen above, in a regime system with often delicate political links and pressures, the “status” of a state is often very important. States are generally careful about “losing face” toward other states and toward their own population. This fear of losing face has traditionally been used in many treaties, including those outside the field of the environment, by imposing a requirement for the state to report on its compliance with the treaty. This report would then allow other states and citizens to hold it accountable for its compliance record. Although reporting procedures can be found in most environmental treaties, they are often vaguely formulated and the reports are badly drafted. Hence the reporting procedure is often criticized for its “weak” character and the absence of sanctions in case of noncompliance with the reporting requirements.

Self-reporting is also criticized, however, because it may lead to self-incrimination. If states take their duties with respect to self-reporting seriously, they should report their own noncompliance. The hesitancy of states to incriminate themselves may be one of the reasons why the reporting requirements of environmental treaties are often violated. Moreover, governments, particularly of smaller states, are sometimes overburdened with administrative tasks, and filing reports is seen as yet another burden. Reporting by states is, therefore, a first step, but obviously no guarantee of compliance.30

Compliance can be improved through monitoring by an independent third party. The likelihood of compliance will indeed to a large extent be influenced by the possibilities provided for in the treaty to monitor compliance effectively. This in turn also depends on the contents of the primary
The Montreal Protocol

The approach to international environmental treaty design has changed in the past decades, mainly because of the new, more realistic "managerial" approach. Prime examples of this new approach are the Vienna Convention for the Protection of the Ozone Layer and, more important, its subsequent Montreal Protocol on Substances That Deplete the Ozone Layer, adopted under this convention, are used.

The Vienna Convention was adopted in 1985. This convention did not contain any substantive commitments for the states but provided for a general framework, including the possibility of adopting protocols in the Conference of the Parties, the main institution set up under the convention. Only two years after the adoption of the convention the 1987 Montreal Protocol on Substances That Deplete the Ozone Layer was adopted under the Vienna Convention. The Vienna Convention and more particularly its Montreal Protocol surprised the international community by their swift adoption, their specific goals, their effectiveness, and the large and still increasing number of states party to it (163 as of January 1997). One of the main reasons given for this effectiveness is the design of the treaty system. This system has several "modern" characteristics that make it very suitable for dealing with environmental problems in the modern international context. In many of the more recent international environmental treaties, the Vienna/Montreal system is used as a model. One of the main reasons is the flexibility of its primary rule system.

The Vienna Convention establishes the Conference of the Parties (Article 6), which is to meet "at regular intervals," in practice every three to four years. The Montreal Protocol adds to this Conference of the Parties a Meeting of the Parties. These meetings now are held annually to discuss the implementation of the commitments and possible improvements to or adoption of new commitments. They are organized by the Ozone Secretariat, set up under Article 7 of the Vienna Convention and Article 12 of the Montreal Protocol. The regular convening of the Conference of the Parties has proven very useful in keeping the treaty objectives on the political agenda and has ensured a continuous updating of the treaty goals and standards. The continuous updating of the treaty goals and standards was made possible by the framework structure chosen by the Vienna Convention. Although this framework structure was not new (it was also used in the 1979 UN-ECE Convention on Long-Range rules. The Montreal Protocol, for instance, regulated the production of chlorofluorocarbons (CFCs) because it was easier to monitor a few producers than thousands of consumers.

Some treaties, such as those on nuclear weapons, allow on-site monitoring. This obviously is one of the most effective instruments to control whether states not only formally adopt legislation implementing a treaty, but also in fact comply with the contents. On-site monitoring is, however, still heavily debated, since it constitutes an important infringement on state sovereignty. Even in the EU, on-site monitoring by a European authority of member state violations of environmental directives is still not allowed. The compliance record will inevitably depend upon the ability to monitor violations. This brought Gro Harlem Brundtland, the Norwegian prime minister...
A "Managerial" Primary Rule System

Transboundary Air Pollution), it proved particularly effective. Whereas the Vienna Convention only lays down the framework for further negotiations, the real commitments are laid down in the Montreal Protocol, the first and, to date, only adopted protocol under this convention. At the meetings of the parties to the conference unexpected agreement could be reached on a regular updating of the protocol. The Montreal Protocol has in its short existence already seen three adjustments and amendments, in 1990 at the London meeting, in 1992 at the Copenhagen meeting (at which the timetable for a total phase-out of ozone depleting substances was accelerated), and most recently in September 1997 at the Montreal meeting. This shows how the likelihood of compliance can be influenced in the treaty design stage, by adopting primary rules that allow for flexibility.

The Montreal Protocol also provides an example of how the individual capacities of states may determine this willingness to accept treaty obligations in the first place. India and China would not become parties to the Montreal Protocol until the agreement about compensatory financing had been adopted at the London meeting in 1990. This agreement provided for financial support to developing states in return for and in order to allow these states to become party to the protocol and actually be financially capable of complying with its obligations.

Under the Montreal Protocol various instruments have been developed to remedy the incapacity problem: a Multilateral Fund was set up (Article 10) in order to provide this financial assistance. The implementing agencies of this fund—the International Bank for Reconstruction and Development (World Bank), the United Nations Environment Programme, and the United Nations Development Programme—draw up "country programmes" and "country studies" consisting of a combination of financial support, assistance, and training. Furthermore, the Montreal Protocol provides for the transfer of technology under its Article 10A. On the basis of this article all states party to the protocol "shall take every practicable step" to ensure that "the best available, environmentally safe substitutes and related technologies are expeditiously transferred" to developing countries (as defined in Article 5[1] of the protocol) and that those transfers "occur under fair and most favourable conditions."

and chair of the World Commission on Environment and Development, to recommend the establishment of "an international authority with the power to verify actual emission and to react with legal measures if there are violations of the rules" in order to ensure compliance with carbon dioxide emission targets.31

The problems with reporting procedures have led to the development of compliance information systems.32 Such compliance information systems contain elaborate procedures for the provision of information by member states, the possible review of this information by independent experts, and the availability of this information to the general public. By developing a more elaborate and transparent system for the provision of information on the compliance of member states with a treaty, the accountability of member states automatically increases.
For example, the FCCC contains in Articles 4 and 12 elaborate provisions concerning member states' communication of their implementation of the convention. Although the word reporting is avoided in the context of the convention and replaced by the word communicate, these communications have the character of national reports. The first FCCC Conference of the Parties (COP 1) in 1995 promulgated guidelines for the preparation of national communications, and more important, procedures were adopted for the in-depth review of individual reports from Annex I countries. At COP 2, which took place in July 1996 in Geneva, more extensive guidelines were drawn up for the country reports. By May 15, 1997, thirty-two in-depth reviews of national communications from Annex I countries were drawn up by experts. Although written in "non-confrontational language" (Decision 2/COP1) the in-depth review procedure does provide an important impetus for member states to increase the efforts of complying. All national communications and the in-depth reviews are collected by the FCCC Secretariat in Bonn (Germany). Under Article 12(10) of the FCCC the Secretariat makes these communications publicly available. The Secretariat has improved the availability to the public by publishing those reports on the Internet at the Secretariat's site (http://www.unfccc.de).

This increased attention to compliance information systems and to reporting procedures is part of the transformation from an enforcement to a managerial approach to compliance. Traditionally, the incentives for states to report their own noncompliance were low, since such an admission could only lead to "bad news," such as the imposition of sanctions. The situation totally changes, however, when noncompliance is not necessarily considered as the intentional act of a sovereign state, but may be due, for example, to incapacity. In that case, reporting this capacity problem may lead the other partners in the regime to look for remedies to overcome the capacity problems of the state concerned, for example, through a transfer of finance or technology. In this managerial approach to compliance, reporting noncompliance should not be threatening but may well be in the state's interest. The desired result of this new approach is that in the end a higher compliance record is achieved than with traditional enforcement methods. Thus, the reporting of noncompliance under the Montreal Protocol leads the Implementation Committee to investigate the possibilities of financial and technical assistance instead of threatening with traditional sanctions.

Responses to Noncompliance

Finally, the likelihood of compliance with an environmental treaty will depend upon the possibilities of coercive or other measures being imposed in reaction to violations.

As we have discussed, traditional treaty mechanisms for noncompliance were restricted to adversarial dispute settlement procedures (DSPs). Traditional dispute settlement procedures, used generally under international environmental law, mostly involve a sequence of diplomatic and legal means
of dispute settlement. Diplomatic settlement procedures usually involve negotiation and consultation in a first instance. If this negotiation and consultation does not lead to a solution, often some form of mediation or conciliation is prescribed. This mediation or conciliation involves third parties or international institutions. In case of deeper conflicts parties often can have recourse to legal means of dispute settlement, either arbitration or the International Court of Justice. In July 1993 the International Court of Justice even set up a special chamber for environmental matters.

This standard sequence of dispute resolution—negotiation, mediation, and finally arbitration or submission to the International Court of Justice—can still also be found in more recent treaties, such as the Vienna Convention for the Protection of the Ozone Layer, 1985, and the FCCC. Article 11 of the Vienna Convention prescribes negotiation as the first means of dispute resolution (para. 1). If this fails, parties must seek mediation by a third party (para. 2). As an ultimate remedy, arbitration or submission to the International Court of Justice, or in absence of agreement over this remedy a conciliation committee, is prescribed (paras. 3 to 5). Article 14 of the FCCC contains similar wording.

Although the number of cases brought under dispute settlement proceedings has increased in the last few years, they are still very rare, especially considering the compliance problems with most environmental treaties. The International Court of Justice has so far never dealt with a purely environmental conflict. Conflicts under dispute settlement proceedings mostly involve either trade relationships or territorial disputes. One of the reasons for the small use of dispute settlement instruments is the fact that these procedures are characterized by an adversarial relationship between the parties, and are only used as a last resort. States are rarely willing to risk their relationship with other “sovereign” international actors by openly challenging them. As we have already stated above, even in a closed community of states such as the EU the state complaints procedure under Article 170 of the treaty establishing the European Community (EC Treaty) has rarely been used. Not only are traditional dispute settlement procedures not often used, they are also considered less effective and appropriate in environmental treaties. The result of noncompliance with environmental treaties is often damage to the global commons in general, affecting all states, rather than several well-identifiable parties.

The ineffectiveness of dispute settlement proceedings in international environmental agreements has led to the development of a new system of responding to noncompliance, called noncompliance procedures (NCPs). Such procedures, rather than “punishing” noncompliance, are aimed at finding ways to facilitate compliance by the state that is in breach of its obligations. They provide a political framework for “amicable” responses to noncompliance that cannot be considered “wrongful.” This tendency toward NCPs reflects the new managerial approach, which no longer assumes that noncompliance is the result of a willful desire to violate.
One of the consequences of shifting from an adversarial approach to a more managerial approach is that sanctions play only a minor role in the noncompliance response system. Three categories of sanctions can be distinguished: the treaty-based sanctions, membership sanctions, and unilateral sanctions. The latter category of unilateral sanctions is now severely restricted under international law. As we have discussed above, resort to the use of military force is exceptional. Trade sanctions are increasingly difficult to invoke under the rapidly developing international trade regimes. Treaty-based sanctions have also not proven very effective. The European Union treaty, for instance, has had since November 1993 a provision for the imposition of a financial penalty upon a member state that is in breach of its obligations (Article 171 of the EC Treaty). Although this provision was introduced in 1993, the EU Commission (which supervises the application of the EC Treaty) started the first procedures in 1997, which indicates the political difficulties involved in the use of such a system. Sanctions against states party to an international treaty, including expulsion or suspension of rights and privileges, are also not considered an effective response in the case of noncompliance with an environmental treaty, since one of the aims of environmental treaties is to achieve global membership (see box on the noncompliance procedures of the Montreal Protocol).

Toward Comprehensive Noncompliance Response Systems

In this chapter we have tried to give an overview of recent developments concerning compliance with international environmental treaties. We have observed a clear shift from the "old" approach, including dispute settlement proceedings and sanctions in treaties, to the "managerial" approach, which tries to use a more comprehensive system of different methods for solving compliance problems. Increasingly, more recent treaties have included a comprehensive combination of different instruments for responding to noncompliance. These systems, also referred to as comprehensive noncompliance response systems, contain not only methods to sanction violations but, more important, methods to facilitate compliance, improve transparency, improve reporting procedures, and prevent violations.

As we have already discussed, the various capacities of states can also be taken into account in the design of the primary rule system by allowing financial or technology transfer mechanisms. These differing capacities can also be taken into account in the noncompliance response system. The fact that self-reporting of noncompliance should not immediately lead to "negative" sanctions but can lead to actual support to remedy incapacity can in turn also increase the reporting record. Although the managerial approach is proving very successful in treaties such as the Vienna Convention and the Montreal Protocol, one should not forget that we are only at the beginning of new efforts to find solutions to compliance problems. The instrument of joint implementation under the FCCC, for instance, is still to be tested. In
Noncompliance Procedures: Montreal Protocol

In the more recent environmental treaties one can observe new noncompliance procedures, often side by side with the traditional dispute settlement procedures. A prime example of a well-functioning noncompliance procedure is the procedure set up under Article 8 of the Montreal Protocol. This article states that the parties to the protocol "shall consider and approve procedures and institutional mechanisms for determining noncompliance with the provisions of this Protocol and for treatment of Parties found to be in noncompliance."

At the Copenhagen meeting in November 1992 the Meeting of the Parties adopted the procedure under this article. Under this noncompliance procedure an Implementation Committee is set up. The committee consists of ten representatives elected by the Meeting of the Parties based on equitable geographical distribution. Although under the noncompliance procedure parties can also submit reservations regarding another party's implementation of its obligations under the protocol, this adversarial action has in practice not become the main function of the procedure. The focus has instead been put on the nonadversarial functions. The procedure allows states, when they believe they are unable to comply with their obligations, to report this inability to the Secretariat and the Implementation Committee. The Implementation Committee also discusses the general quality and the reliability of the data contained in the member states' reports. The Implementation Committee, meeting three to four times a year, has in fact assumed a very active role in improving the quality and reliability of the data reported by the member states and by seeking in a cooperative sphere solutions for parties with administrative structural and financial difficulties.

The noncompliance procedure under the Montreal Protocol operates independently from the dispute settlement procedure laid down in Article 11 of the Vienna Convention. Although it is tempting to see the noncompliance procedures as a prelude to the heavier dispute settlement procedure, the international community has so far been very hesitant to take this approach. This hesitancy again appears in the current discussions on the adoption of a noncompliance procedure under Article 13 of the FCCC. The resistance against linking the two procedures can be explained by the fear of states that linking them will reduce the use of the noncompliance procedure, and thus that it might be followed by an "uncomfortable" dispute settlement proceeding.


many other areas it remains difficult to reach any international consensus at all on the protection of our global environment.

International environmental law is still in a phase in which the adoption of standards is more of a concern than the actual compliance with these standards. One should not forget, however, that it is especially in the phase
of adoption that a well-designed noncompliance response system can prove decisive in getting states to agree to new commitments.

Notes


4. Article 170 of the treaty establishing the European Community, one of the treaties forming the basis of the EU, contains the possibility for one or more member states to bring another member state before the European Court of Justice. In practice this procedure is used very rarely. One example is the Court's judgment in the fisheries conflict between France and the United Kingdom (Case 141/78). In this case the UK was held to have breached EC law when searching a French trawler and convoking its master.

5. This new idea is probably best formulated by Abraham Chayes and Antonia Handler-Chayes, The New Sovereignty: Compliance with International Regulatory Agreements (Cambridge: Harvard University Press, 1995), see especially chap. 1.


8. Articles 2 (3) and 2 (4), in combination with Articles 42 and 51 of the UN treaty.
10. Jacobson and Brown Weiss, "Strengthening Compliance," cite the important role of the Brazilian president Fernando Collor in the UNCED conference (142).
12. See, for example, James Cameron, "Compliance Citizens and NGOs," in Cameron, Werksman, and Roderick, Improving Compliance with International Environmental Law, 29–42, and see more particularly the book review by Oran R. Young in International Environmental Affairs 9 (winter 1997): 84. The role of NGOs is also discussed in Chayes and Handler-Chayes, The New Sovereignty, 250–270.
15. Ibid., 129.
20. Ibid., 11.
23. The developed country Parties and other Parties included in Annex I commit themselves specifically as provided for in the following (a) Each of these Parties shall adopt national policies and take corresponding measures on the mitigation of climate change, by limiting its anthropogenic emissions of greenhouse gases and protecting and enhancing its greenhouse gas sinks and reservoirs. These policies and measures will demonstrate that developed countries are taking the lead in modifying longer-term trends in anthropogenic emissions consistent with the objective of the Convention, recognizing that the return by the end of the present decade to earlier levels of anthropogenic emissions of carbon dioxide and other greenhouse gases not controlled by the Montreal Protocol would contribute to such modification, and taking into account the differences in these Parties' starting points and approaches, economic structures and resource bases, the need to maintain strong and sustainable economic growth, available technologies and other individual circumstances, as well as the need for equitable and appropriate contributions by each of these Parties to the global effort regarding that objective. These Parties may implement such policies and measures jointly with other Parties and may assist other Parties in contributing to the achievement of the objective of the Convention. . . .
25. For further details on this concept of joint implementation, see Parhana Yamin, "The Use of Joint Implementation to Increase Compliance with the Climate Change Convention," in Cameron, Werksman, and Roderrick, *Improving Compliance with International Environmental Law*, 229–242.
28. British Petroleum surprised the international community with the speech of its group chief executive John Browne at Stanford on May 19, 1997, in which BP officially acknowledged the existence of a climate change problem and stressed the need for international action, the first major oil company to do so.
30. Several varieties of reporting and data collection are discussed by Chayes and Handler-Chayes, The New Sovereignty, 154–173.
33. A recent example of a case that does not explicitly deal with environmental issues, but in which the environment plays an important role, is the one concerning the Gabcikovo-Nagymaros Dam on the Danube River in which the International Court of Justice pronounced judgment on September 25, 1997.