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CENTER FOR OCEANS LAW AND POLICY
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BY

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*Don
Savel ready.
but what is
The problem
with Part XI?*

It is indeed an honor to open this panel discussion on "Issues in Acceptance" of the Law of the Sea Convention. My talk is slated as "Overview and Fisheries." I will do my best to provide an overview; please bear with me if I don't delve deeply into the field of fisheries and do stray beyond it in some respect.

I intend to organize this presentation into four parts.

1. Background
2. The Reality of the Law of the Sea
3. Can We Go it Alone?
4. The Best Reasons for U.S. Reengagement

There is a tendency by some to politicize U.S. oceans policy by pointing to the strong stand taken in the Reagan and Bush Administrations against Part XI of the 1982 Convention and by calling forward the new Administration to change U.S. ocean policy. That, I find, is a superficial, misguided and unhelpful perspective. In fact, U.S. Administrations have consistently recognized the need for a rule of law to govern more than two-thirds of the earth's surface. Since the outset of the LOS negotiations, all U.S. Administrations have sought a widely ratified law of the sea convention to which the U.S. could become a party.

Many here could do a better job than I of writing the history of the United States and the Law of the Sea. Let me highlight but a point or two:

- the U.S. participated actively in the First U.N. Conference on the Law of the Sea and ratified the four resulting Conventions;
- together with the USSR in the 1960s, the U.S. saw the need for a Third U.N. Conference on the Law of the Sea and, in spite of the cold-war adversarial relationship, we worked together to bring it about;
- the U.S. played an active role in all negotiations at the Third Conference;
- when Part XI, the deep seabed part, turned out to be fundamentally flawed we stood up and refused to proceed on its basis;

- but the United States took steps, and we continue to take steps, to consolidate the gains, to emphasize conforming state practice, and to solidify the balance of interests contained elsewhere in the Convention; the U.S. Oceans Policy Statement of 1983 establishes that we act in accordance therewith and we expect others to do likewise.

At all times, in all Administrations, our objective has been an acceptable, widely ratified convention pertaining to all aspects of ocean use. That became unachievable by vote of the Conference in 1982. Today, more than ten years later, we are asking whether that objective is once again in reach.

Between 1982 and today the United States has had a healthy skepticism about the efforts to fix or creatively implement Part XI. Initially, we had few friends internationally. As time passed, more and more of the industrialized countries began to realize the unworkability of Part XI and the inherent problems of principle and burgeoning institutions contained therein. Then the U.S.S.R. came on side, as did major developing States as the world began to emphasize market economics. Today there is a virtual consensus that Part XI needs to be fixed. Whether there is a consensus on what those fixes are, however, remains to be seen.

For several years now the Secretary General of the United Nations has held an informal series of discussions designed to determine whether the political will exists to come to grips with the problems of Part XI. And problems there are. Remember: production and commodity controls and quotas; mandatory technology transfer; a member-financed operating arm called the Enterprise that had competitive advantages over independent operators; no protection for pioneer investments; financial discretion in the UN General Assembly-like Authority; voting formulas not commensurate with U.S. interests; no guaranteed access to mine sites; no guaranteed seat for the U.S. on the Council; and a review conference that could change U.S. treaty obligations over our objections. These problems remain.

The Secretary General's discussions have created a positive atmosphere. Interesting ideas have been suggested to deal with one problem or another. There is a growing sense that the time for conceptual considerations has passed and it is now time to look at more concrete proposals.

There are now 55 ratifications. As you will recall the Convention will enter into force one year following the deposit of the 60th ratification.

The new Administration is determined to focus quickly on this issue. There are questions of process, form and substance which

must be addressed. I cannot prejudge today where the Administration will come out; what I can say is what all of us know that have followed the issue for years -- the time is ripe.

2. The Reality of the Law of the Sea Convention

As political leaders within the United States refocus on the Law of the Sea Convention, I believe it is important to ensure that policy makers and the public understand just what the Convention does and what it does not do. When we speak of a widely ratified Law of the Sea Convention covering all aspects of ocean use it creates an image which suggests that there is to be a legal code applicable to all states which answers all questions that may arise.

At one level of generality that is indeed the case. At another, it is a substantial oversimplification that risks misleading policy makers on two important points. One, there are always going to be the outlaws. States that do not live up to their legal obligations or don't undertake them in the first place. The Convention can't deal with this problem. Two, and perhaps of more direct concern in this context, it is simply true that many tough issues are dealt with ambiguously in the Convention text. This ambiguity resulted from the consensus process utilized during most of the negotiation. Often, Committee chairman responsible for producing the text put words in the text for one side of a debate and words in the text for the other side thereby papering over fundamental points of difference -- between states in the 1970s and which are still present in the 1990s.

One can be too critical of ambiguity. It should be no revelation that the Convention is ambiguous in parts. In others it is not. But even where the Convention is ambiguous, it provides a service. And any critic of the Convention must assess the wisdom of attacking it for this reason. Even in these areas it frames, it channels, it provides a foundation. It may not answer a question clearly but it does identify the side boards -- the bounds within which a matter must be decided.

This framework which the Convention provides is vastly important. No better illustration of this is the progress made at UNCED on ocean issues. The achievement of the ocean chapter of Agenda 21 is directly related to the fact that the international community had a starting point, developed in eight years of consensus building at the Third UN Conference on the Law of the Sea. There was a framework -- a foundation -- a basis upon which to build where the constraining factors of the debate were known and understood. That is the reality of the Convention.

In this regard, I would like to examine one fisheries issue as a means of illustrating what the Convention does and does not do.

Straddling Stocks. We -- the U.S. -- didn't even know we had a straddling stock issue in 1982. Our fishing industry constituents didn't know it. The Donut Hole Fishery -- in the central Bering Sea beyond the U.S. and Russian 200 mile zones -- did not begin until the mid-1980s. Fleets from Japan, Poland, Korea, and China -- displaced from 200 mile zones -- found a bonanza -- a lode of pollock -- and they quickly exploited it. In just five years the fishery soared and crashed. From over 1.5 million metric tons to less than 10,000 metric tons in 1992. The fish are gone. And in the process, the same stock of pollock in the U.S. zone is devastated. The fishery on this stock is closed. The fishermen that depend upon the fish, the coastal communities that depend upon the fishermen, the birds and mammals all suffer.

For several years the U.S. community went through an exercise of trying to find the specific answer to the problem in the 1982 Convention. Various arguments were made -- words were parsed -- as only good common law lawyers can do -- putting together one thought and another to identify a comprehensive legal approach to the problem. And there were pronouncements that the law was this way or that way.

Other countries, such as Canada, similarly situated but on the Atlantic coast, did likewise in relation to its own problem.

Then there were calls that the 1982 Convention was deficient -- flawed -- because it did not lead us inexorably to the answer. But it did frame the debate and it told us to cooperate and negotiate our way through the issue. And that is what we are now doing.

In the Donut Hole negotiations we are about to have our seventh conference in little more than two years. It is an intensive schedule because the issue is important and we are making progress. We have an agreed interim solution for 1993-94 and I have high hopes for a permanent arrangement to be fully negotiated by the end of the year.

The point is that the 1982 Convention is not deficient when it direct States to cooperate on a particular matter within the framework it provides. Day by day, year by year, new issues arise; our Conference negotiators were not always prophets. They left it to us -- each day -- to sort out the details. And this we can do, without detracting from the Convention by creating new agreements and new understandings of a global and regional nature that deal with marine affairs and fulfill the Convention.

No where is this requirement more true than in Part XII of the Convention. The Marine Environment Section was negotiated in a different era -- almost the dark ages of international environmental activism. But the challenge is not to renegotiate

Part XII. The challenge is to negotiate through the IMO and other relevant fora marine environmental agreements which create solutions to specific problems in furtherance of the general duties to cooperate laid out in Part XII.

The Convention is not the end for the law of the sea and oceans policy. It is a means to these ends. Much has been done and much remains to be done within the framework it provides.

3. Can We Go it Alone?

As U.S. policy makers reexamine the Law of the Sea Convention the question will be asked: Can the U.S. go forward without being a party to the Convention? The answer is yes. That may not be the best position to be in; but, nonetheless, the answer is yes.

For the last ten years the U.S. has operated as if the non-seabeds provisions were obligations of the United States. There is no reason why we cannot continue to do so. We would need to continue to be vigilant on our own behalf not to allow U.S. laws and regulatory practice to take us beyond the rules of the Convention. We would also need to continue to be vigilant in promoting our rights to use the oceans consistent with the balance of interests set out in the Convention text. But we will need to do these things in all events.

Further, our EEZ and territorial sea and continental shelf are secure. Our laws and power make it so.

Our deep seabed miners' interests are protected by our laws and the reciprocating state agreements which have been negotiated with the major countries with seabed mining interests.

Our rights to navigate on, over and under the world's oceans are secured by custom, power, and the customary international law set out in the 1982 Convention.

So, yes, if we must, we can go forward without a legally binding treaty. We have proved it over the last ten years. We may need to rely on this course into the future if a solution to Part XI is not attainable. We must not lose sight of the fact that this is an option.

4. The Best Reasons For U.S. Reengagement

If we can take care of U.S. interests without being party to the Convention, why should the U.S. worry about any of this? Why should we try? Why should we put ourselves through the domestic hassles and international negotiations which will be required. Generally, the shorthand answer is that U.S. interests can best be served by a sure and stable ocean regime in force for many

States. I agree with that. It answers the question. It is obviously better for there to be more agreement than less. However, if we can go it alone, if our fundamental needs are secure through customary international law, if the way the U.S. acts would not be much different whatever course is chosen, why run the risks of trying to fix this? Why not leave well enough alone?

I'd like to try to provide three answers from my perspective. I'm sure someone from DOD or someone concerned solely with seabed mining would give you different reasons. These are mine alone.

First, those of us that work at the State Department are fond of the phrase "U.S. leadership." We like to "exercise leadership." Leadership helps one shape the things to come. Leadership provides opportunities to control events and agendas, to minimize problems, to take advantage of opportunities.

In the Marine Corps we had a saying -- and if I delete the explicatives it went: If you're going to lead, lead; if you're going to follow, follow; otherwise -- get out of the way.

It seems to me that pretty aptly describes where we are today concerning the Law of the Sea.

We are proud of talking about our leadership role on ocean issues -- but it is going to be pretty hard to be a leader on oceans if we are not prepared to play in the biggest game in town.

And, to most observers, including this one, it appears as if the game is about to resume with a new degree of seriousness not seen since 1980.

Further, if we avoid the big show -- the 1982 Convention, it is going to be much more difficult to claim a leadership role in the many important, but subsidiary ocean negotiations. UNCED itself spun off four global negotiations in the oceans area: highly migratory species and straddling stocks; land based sources of marine pollution; coastal zone management; and small island states. But there are many, many more. I bet that on average there is at least one major international negotiation on an oceans related topic every week in which the United States has substantive interests at stake as well as the interest of ensuring that the parameters within which the substance is negotiated is within the Law of the Sea framework.

So -- leadership. U.S. leadership. Our leadership across the board is subject to question if we don't seriously explore the opportunity, and if it truly exists, try to fix Part XI.

A second reason to engage is that only the folks at the table are going to be able to influence the outcome on close questions

and the implementation of key provisions. There are two aspects of this: one which relates to the negotiation of the fix to Part XI itself; the other which relates to the implementation of the remainder of the Convention. The importance of the first aspect is obvious; the importance of the second is less so, but when one recalls that the Convention is really a framework -- particularly in certain key areas -- need for a seat at the table should be apparent.

The latter point is an important factor motivating some close allies. They note that once the Convention is in force it will be the Parties thereto that shape the interpretation of the Convention through implementation of key provisions. On this score, when one considers the key issues relating to navigation and over flight in straits and archipelagoes, the establishment of archipelagic sealanes, the continuing debate over prior notification or authorization of warship innocent passage in the territorial sea, the functional jurisdiction of coastal States in the various coastal zones -- all of these -- as they are debated -- if we want to be heard we need to be there.

A third reason for reengagement -- and this may sound inconsistent with what I said about the reality of the Law of the Sea Convention -- is the fact that rules are important. Even when a rule is not subscribed to by everyone, even when the rule contains ambiguities, it is nonetheless important.

Rules shape the debate that arises out of any factual controversy. A recent example -- four U.S. fishing vessels were arrested by the Costa Rican government. These vessels were in transit from Florida to California before heading for the Western Pacific. They had no fishing gear on board. Costa Rican law required a transit permit in such cases for fishing vessels in transit through the Costa Rican EEZ. This law and arrest were inconsistent with our view on the Law of the Sea, but Costa Rica's view was different. But the debate started with the 1982 Convention. The problem ultimately was resolved. Can you imagine, however, if we had started the debate without the common ground of the 1982 Convention.

Rules provide a basis for concerted action. I remember military operations in the late 1970s where our allies recognized 12-mile territorial seas and we did not. It proved impossible to write contingency rules of engagement even with our friends. There was no common foundation. No such problem occurred in the Persian Gulf war. The 1982 Convention was the understood framework for allied cooperation and was, indeed, the basis upon which other States of the region acted.

Third, rules of ocean use protect the sovereignty and independence of coastal States. The rules mean that others do not need to be concerned about the government of the country that

controls the land territory. If the rules are respected, the ocean user need not try to control decision-making in the land territory. Everyone wins in this situation. This is indeed what the Law of the Sea is really about.

In closing, I would like to thank the Center for its initiative for holding this Conference.

Perhaps today more than ever before an opportunity exists to create a widely acceptable Law of the Sea Convention. The Administration is mindful of the fact and is actively engaged in a review of the issue to determine the course it wishes to take.

Thank you.

I. OCEANS: THE BALANCE OF LIFE

In the Earth's wheel of life, the oceans provide the balance.¹ Covering over 70 per cent of the planet's surface, they play a critical role in maintaining its life-support systems, in moderating its climate, and in sustaining animals and plants, including minute, oxygen-producing phytoplankton. They provide protein, transportation, energy, employment, recreation, and other economic, social, and cultural activities.

The oceans also provide the ultimate sink for the by-products of human activities. Huge, closed septic tanks, they receive wastes from cities, farms, and industries via sewage outfalls, dumping from barges and ships, coastal run-off, river discharge, and even atmospheric transport. In the last few decades, the growth of the world economy, the burgeoning demand for food and fuel, and accumulating discharges of wastes have begun to press against the bountiful limits of the oceans.

The oceans are marked by a fundamental unity from which there is no escape. Interconnected cycles of energy, climate, marine living resources, and human activities move through coastal waters, regional seas, and the closed oceans. The effects of urban, industrial, and agricultural growth are contained within no nation's Exclusive Economic Zone; they pass through currents of water and air from nation to nation, and through complex food chains from species to species, distributing the burdens of development, if not the benefits, to both rich and poor.

Only the high seas outside of national jurisdiction are truly 'commons'; but fish species, pollution, and other effects of economic development do not respect these legal boundaries. Sound management of the ocean commons will require management of land-based activities as well. Five zones bear on this management: inland areas, which affect the oceans mostly via rivers; coastal lands—swamps, marshes, and so on—close to the sea, where human activities can directly affect the adjacent waters; coastal waters—estuaries, lagoons, and shallow waters generally—where the effects of land-based activities are dominant; offshore waters, out roughly to the edge of the continental shelf; and the high seas, largely beyond the 200-mile EEZs of coastal states' control.

Major fisheries are found mostly in offshore waters, while pollution affecting them comes mostly from inland sources and is concentrated in coastal waters. Formal international management is essential in the areas beyond the EEZs, although greater international co-operation,

'The world's environmental problems are greater than the sum of those in each country. Certainly, they can no longer be dealt with purely on a nation-state basis. The World Commission on Environment and Development must strike at this fundamental problem by recommending specific ways for countries to co-operate to surmount sovereignty, to embrace international instruments in order to deal with global threats. The growing trend towards isolationism demonstrates that the current rhythm of history is out of harmony with human aspirations, even with its chances for survival.'

The challenge ahead is for us to transcend the self-interests of our respective nation-states so as to embrace a broader self-interest — the survival of the human species in a threatened world.'

Hon. Tom McMillan

Minister of Environment, Government of Canada
WCED Public Hearing, Ottawa, 26-27 May 1986

including improved frameworks to coordinate national action, is needed for all areas.

The Balance Under Threat

Today, the living resources of the sea are under threat from over-exploitation, pollution, and land-based development. Most major familiar fish stocks throughout the waters over the continental shelves, which provide 95 per cent of the world's fish catch, are now threatened by overfishing.

Other threats are more concentrated. The effects of pollution and land development are most severe in coastal waters and semi-enclosed seas along the world's shore-lines. The use of coastal areas for settlement, industry, energy facilities, and recreation will accelerate, as will the upstream manipulation of estuarine river systems through dams or diversion for agriculture and municipal water supplies. These pressures have destroyed estuarine habitats as irrevocably as direct dredging, filling, or paving. Shore-lines and their resources will suffer ever increasing damage if current, business-as-usual approaches to policy, management, and institutions continue.

Certain coastal and offshore waters are especially vulnerable to ecologically insensitive onshore development, to competitive over-fishing, and to pollution. The trends are of special concern in coastal areas where pollution by domestic sewage, industrial wastes, and pesticide and fertilizer run-off may threaten not only human health but also the development of fisheries.

Even the high seas are beginning to show some signs of stress from the billions of tons of contaminants added each year. Sediments brought to the oceans by great rivers such as the Amazon can be traced for as much as 2,000 kilometres out to sea.² Heavy metals from coal-burning plants and some industrial processes also reach the oceans via the atmosphere. The amount of oil spilled annually from tankers now approaches 1.5 million tons.³ The marine environment, exposed to nuclear radiation from past nuclear weapons tests, is receiving more exposure from the continuing disposal of low-level radioactive wastes.

New evidence of a possible rapid depletion of the ozone layer and a consequent increase in ultraviolet radiation poses a threat not only to human health but to ocean life. Some scientists believe that this radiation could kill sensitive phytoplankton and fish larvae floating near the ocean's surface, damaging ocean food chains and possibly disrupting planetary support systems.⁴

High concentrations of substances such as heavy metals, organochlorines, and petroleum have been found on the oceans' surface. With continued accumulation, these could have complex and long-lasting effects.⁵ The sea-floor is a region of complex physical, chemical, and biological activity where microbial processes play a major role, but as yet serious damage is known to have occurred only in very localized regions. Although these findings are encouraging, given accelerating pressures and the inadequacy of present data they provide no grounds for complacency.

Oceans Management

Looking to the next century, the Commission is convinced that sustainable development, if not survival itself, depends on significant advances in the management of the oceans. Considerable changes will be required in our institutions and policies and more resources will have to be committed to oceans management.

Three imperatives lie at the heart of the oceans management question:

- The underlying unity of the oceans requires effective global management regimes.
- The shared resource characteristics of many regional seas make forms of regional management mandatory.
- The major land-based threats to the oceans require effective national actions based on international co-operation.

Mutual dependence has increased in recent years. The Law of the Sea Convention, with the establishment of the 200-mile EEZs, has

put an additional 35 per cent of the oceans' surface under national control with regard to management of natural resources. It has also provided an institutional setting that could lead to better management of these areas, given that single governments may be expected to manage more rationally resources over which they have sole control. However, this expectation ignores the realities of short-sighted political and economic goals.

An international ecosystem approach is required for the management of these resources for sustained use. Significant gains have been made in past decades, nationally and internationally, and many essential components have been put in place. But they do not add up to a system that reflects the imperatives mentioned above. Where the EEZs of several states come together in semi-enclosed or regional seas, integrated management requires varying degrees of international co-operation, such as joint monitoring and research on migratory species and measures to combat pollution and regulate actions whose effects reach across boundaries.

When it comes to the high seas beyond national jurisdiction, international action is essential. The sum of the multiple conventions and programmes now in place do not and cannot represent such a regime. Even the separate UN programmes cannot easily be coordinated, given the structure of the United Nations.⁶

The Commission believes that a number of actions are urgently needed to improve regimes for oceans management. Thus the Commission proposes measures to:

- strengthen capacity for national action, especially in developing countries;
- improve fisheries management;
- reinforce co-operation in semi-enclosed and regional seas;
- strengthen control of ocean disposal of hazardous and nuclear wastes; and
- advance the Law of the Sea.

National Action

Coastal governments should launch an urgent review of the legal and institutional requirements for integrated management of their EEZs, and of their roles in arrangements for international co-operation. This review should be undertaken within the framework of a clear statement of national goals and priorities. Reducing overexploitation of fisheries in coastal and offshore waters might be one such goal. The rapid clean-up of municipal and industrial pollution discharging into critical marine habitats could be another. Others might include

strengthening national research and management capacity, and producing an inventory of coastal and marine resources.

Given the increased pressures on coastal and marine resources projected through the year 2000, all coastal states should have a complete inventory of these assets. Drawing on senior experts from national and international agencies, nations could deploy the latest satellite mapping and other techniques to put together an inventory of these resources and then monitor changes in them.

Many developing countries will require assistance to strengthen their legal and institutional frameworks needed for integrated management of coastal resources. Many small island and maritime developing countries lack the economic or military means to prevent the exploitation of their coastal resources or the pollution of their waters by powerful countries or companies. This has become a major concern in the Pacific in particular, and threatens the political stability of the region. International development banks and development assistance agencies should establish programmes to support the development of this institutional capacity.

Fisheries Management

World fisheries have been expanding since the Second World War, with the global catch rising at a steady 6-7 per cent annually from 20 million to 65 million tons between 1950 and 1969. But after 1970, as more and more stocks were depleted, the average annual growth in catches fell to only about 1 per cent. (See Table 10.1.) With conventional management practices, the growth era in fisheries is over. Even assuming restored productivity in now depleted stocks, and an increased harvest from underutilized fisheries, FAO sees only a gradual increase in catches, perhaps rising from current levels of over 80 million tons to about 100 million. This does not augur well for future food security, especially in low-income countries where fish are a principal source of animal protein and where millions secure their livelihoods from fisheries activities.⁷

Overexploitation threatens many stocks as economic resources. Several of the world's largest fisheries—the Peruvian anchoveta, several North Atlantic herring stocks, and the Californian sardine—have collapsed following periods of heavy fishing. In some of the areas affected by these collapses, and in other rich fisheries such as the Gulf of Thailand and off West Africa, heavy fishing has been followed by marked changes in species composition.⁸ The reasons for these changes are not well understood, and more research is needed into the responses of marine resources to exploitation so that managers

TABLE 10.1

World Fish Catch in Major Fisheries, 1979-84 (thousand tons)

Fishery	1979	1980	1981	1982	1983	1984
N. Atlantic	14,667	14,676	14,489	13,597	13,891	13,940
N. Pacific	20,303	20,733	21,908	22,603	23,666	26,416
Cent. Atlantic	6,064	6,867	6,833	7,239	7,210	7,164
Cent. Pacific	7,536	7,910	8,478	8,175	7,848	8,531
Indian Ocean	3,541	3,693	3,728	3,852	4,061	4,362
South Atlantic	4,420	3,895	4,037	4,340	4,314	3,957
South Pacific	7,242	6,619	7,240	8,328	6,724	8,684
Inland	7,240	7,603	8,138	8,455	9,131	9,716
Total*	71,014	71,996	74,850	76,590	76,846	82,770
Developed	37,143	38,234	38,890	39,265	39,991	42,412
Developing	33,871	33,758	35,961	37,326	36,855	40,358
Developing countries' catch as per cent of world total	47.7	46.9	48.0	48.7	48.0	48.8

* Columns do not add to totals due to rounding.

Source: Based on data in FAO, *Yearbooks of Fishery Statistics* (Rome: 1979-84).

can receive better scientific advice. Greater support for such work is urgently needed, and this support must include additional assistance to developing countries in increasing their research capacity and their knowledge of their own resources.

One factor leading to the establishment of extended EEZs was the concern of coastal states, both industrialized and developing, over the depletion of fisheries off their coasts. A large number of conventions had been established covering most major fisheries, but they proved inadequate in most cases. Participating countries were in general unable to overcome the difficulties of allocating shares to limited common resources. Improved management was seen as an urgent need, and open access was perceived as the main obstacle to it.

The advent of extended EEZs under the Law of the Sea Convention was expected to solve or at least alleviate the problem. Coastal states were required to introduce effective conservation and management of the living resources in their EEZs. They could also control the activities of foreign fishermen and develop their own fisheries.

Industrial countries have been much more successful in doing this

wastes at sea or in the sea-bed. Moreover, it would seem prudent to anticipate continuing opposition to sea dumping and to actively pursue the siting and development of environmentally safe, land-based methods of disposal.

Several other conventions regulate the dumping of wastes in the north-east Atlantic and North Sea, the Mediterranean Sea, and the Baltic Sea. Most of the Regional Seas Conventions also include a general provision calling on contracting parties to take all appropriate measures to prevent and reduce pollution caused by dumping.

Land-based sources of nuclear waste have become significant in the North Sea, where high levels of radioactivity have been found in fish, and could threaten other seas.¹⁶ The Convention for the Prevention of Marine Pollution from Land-Based Sources (Paris Convention) was ratified in 1978 by eight states and the European Economic Community. While it has achieved some international co-operation, its silence on nuclear plants and its acceptance of the 'best available technology' principle in determining permitted levels of radioactive discharges clearly needs to be reviewed.

The Law of the Sea Convention requires states to establish national laws and regulations to 'prevent, reduce and control pollution of the marine environment from dumping'. It also requires express prior approval by the coastal state for dumping in the territorial sea, in the EEZs, and onto the continental shelf. The legislative history of this Article indicates that coastal states have not only the right to act but a duty to do so. States also have an obligation under the Law of the Sea to ensure that their activities do not injure the health and environment of neighbouring states and the commons.

The Commission encourages the London Dumping Convention to reaffirm the rights and responsibilities of states to control and regulate dumping within the 200-mile EEZ. It is urgent that they do so, as oceans and food chains respect no boundaries.

Moreover, all states should undertake to report releases of toxic and radioactive substances from land-based sources into any body of water to the appropriate Convention Secretariat so that they may begin to report on the aggregate releases into various seas. Competent authorities must be designated to keep records of the nature and quantities of wastes dumped. Beyond that, regional institutions should forward this information to the London Dumping Convention secretariat.

The Law of the Sea

The United Nations Conference on the Law of the Sea was the most

ambitious attempt ever to provide an internationally agreed regime for the management of the oceans. The resulting Convention represents a major step towards an integrated management regime for the oceans. It has already encouraged national and international action to manage the oceans.¹⁷

The Convention reconciled widely divergent interests of states, and established the basis for a new equity in the use of the oceans and their resources. It confirmed that coastal states are empowered to exercise sovereignty over their territorial sea, sea-bed and subsoil, and the superjacent air space, up to a distance of 12 nautical miles. It redefined the rights of coastal states concerning the continental shelf. It established Exclusive Economic Zones of up to 200 nautical miles within which the coastal state may exercise sovereign rights with regard to the management of national resources, living and non-living, in the waters, sea-bed, and subsoil.

The Convention removed 35 per cent of the oceans as a source of growing conflict between states. It stipulates that coastal states must ensure that the living resources of the EEZs are not endangered by overexploitation. Thus, not only do governments now have the legal power and the self-interest to apply sound principles of resource management within this area, but they have an obligation to do so. The Convention calls for regional co-operation in formulating and implementing conservation and management strategies for living marine resources, including co-operation in the exchange of scientific information, the conservation and development of stocks, and the optimum use of highly migratory species.

Similarly, coastal states now have a clear interest in the sound management of the continental shelf and in the prevention of pollution from land- and sea-based activities. Under the Convention, coastal states may adopt laws and regulations for their EEZs compatible with international rules and standards to combat pollution from vessels.

The Convention also defines the waters, sea-bed, and subsoil beyond the limits of national jurisdiction, and recognizes this as international. Over 45 per cent of the planet's surface, this sea-bed area and its resources are declared to be the 'common heritage of mankind', a concept that represents a milestone in the realm of international co-operation. The Convention would bring all mining activities in the sea-bed under the control of an International Seabed Authority.

By early 1987, the Convention had been signed by 159 nations, and 32 countries had ratified it. However, a small number of significant

states had indicated that they were unlikely to ratify it.¹⁸ The reasons for this rest largely with the regime proposed to manage the common sea-bed.

Despite this, many of the Convention's other provisions have been broadly accepted and have already entered into international law and practice in various ways. This process should be encouraged, especially as regards those provisions that relate to the environment. This Commission believes that the Convention should be ratified by the major technological powers and come into force. Indeed, the most significant initial action that nations can take in the interests of the oceans' threatened life-support system is to ratify the Law of the Sea Convention.

II. SPACE: A KEY TO PLANETARY MANAGEMENT

Outer space can play a vital role in ensuring the continued habitability of the Earth, largely through space technology to monitor the vital signs of the planet and aid humans in protecting its health. According to the 1967 Outer Space Treaty, outer space, including the moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use of occupation, or by any other means. The UN Committee on the Peaceful Uses of Outer Space has been labouring to see that these ideals remain on the agenda. This Commission, in view of these developments, considers space as a global commons and part of the common heritage of mankind.

The future of the space as a resource will depend not so much on technology as on the slow and difficult struggle to create sound international institutions to manage this resource. It will depend most of all upon humanity's ability to prevent an arms race in space.

Remote Sensing from Space

If humanity is going to respond effectively to the consequences of changes human activity has induced—the build-up of atmospheric carbon dioxide, depletion of stratospheric ozone, acid precipitation, and tropical forest destruction—better data on the Earth's natural systems will be essential.

Today several dozen satellites contribute to the accumulation of new knowledge about the Earth's systems—for example, about the spread of volcanic gases, enabling scientists for the first time to describe the specific links between a major natural disturbance of the upper atmosphere and changes in the weather thousands of miles away.¹⁹

6We need a kind of new earth/space monitoring system. I think that it goes farther than simply an earth environmental system. It's a combined earth/space monitoring system, a new agency that would have the resources to be able to monitor, report, and recommend in a very systematic way on the earth/space interaction that is so fundamental to a total ecological view of the biosphere.9

Maxwell Cohen
University of Ottawa

WCED Public Hearing, Ottawa, 26-27 May 1986

Satellites also played a key scientific role after the 1986 discovery of a 'hole' in the ozone layer over Antarctica. When ground-based observers noted this phenomenon, archived satellite data were examined and provided a record of seasonal ozone fluctuation extending back nearly a decade.²⁰ And scientists have been able to follow closely the unfolding of the drought in the Sahel region of Africa in the 1980s. Satellite-generated maps correlating rainfall patterns and biomass have served as a tool in understanding droughts and helped in the targeting of relief aid.

Recently, an international and interdisciplinary group of scientists has proposed a major new initiative—the International Geosphere-Biosphere Programme—to be co-ordinated through the International Council of Scientific Unions. It would investigate the biosphere using many technologies, including satellites. This proposal seemed in 1987 to be gaining momentum; it was already influencing the budget decisions of several nations on allocations for future satellite launches and is increasing coordination between existing efforts.

The primary frustration about this 'wealth of data' is that the information is dispersed among governments and institutions, rather than being pooled. UNEP's Global Environment Monitoring System is a modest effort to pool space data relevant to the Earth's habitability. It should be strengthened. But most such efforts are underfunded, undercoordinated, and inadequate to the tasks.

The primary responsibility for action rests initially with national governments, co-operating to pool, store, and exchange data. In time, international efforts might be funded through some direct global revenue source or through contributions from individual nations. (See Chapter 12.)

The Geosynchronous Orbit

From an economic point of view, the most valuable part of the

shift through an extended program of study. Possible variations include seed money and other assistance to help start a small business, or partial income supplements for those who seek less well paid work. The annual cost for 1 million workers might come to \$40 billion.⁵⁷

Not all of this would be a net addition to public expenditures, however, because funds currently devoted to unemployment compensation and other assistance programs could be marshaled for this purpose—and because a program that enables laid-off workers to rejoin the economy as active participants also adds to tax revenues. A variety of benefits have been proposed in the U.S. Congress for displaced coal miners and loggers, but none of the relief measures have been linked to the tax, investment, and research and development policies needed to bring about the shift toward sustainability.⁵⁸

Considering that large numbers of people are already out of work and more are seeking work for the first time every year, the challenge is not only to create as many rewarding jobs as possible but to share available work more equitably. European trade unions have long championed worktime reductions as a means of providing employment for more people. This could be accomplished by shortening hours, cutting the number of workdays per week, extending vacation time, lowering the retirement age, offering parental leave and sabbaticals for continued education, or experimenting with job-sharing arrangements. Individual countries vary widely in the length of average annual worktime and therefore their potential for reductions.⁵⁹

Although many people prefer to spend less time in the factory or at the office, working fewer hours is often not a practical option for them, because in a

commodity-intensive economy they are compelled to seek full-time employment. Yet a key component of sustainability—the production of more-durable goods—provides a crucial underpinning for such a move. When goods do not wear out rapidly, they need not be replaced as frequently. More-durable goods are likely to have higher purchase prices than throwaways, but over time people will spend less on furniture, appliances, and clothing. Hence there is less need for paid work to achieve a given material standard of living.⁶⁰

A more sustainable economy promises great environmental and economic benefits, though the transition will not be without pain. It will produce many losers, particularly among extractive and heavy industries. But the evidence is strong that the winners will outnumber them: more jobs will be created in energy efficiency, recycling, and public transportation than will be lost in the oil and coal industries, car manufacturing, and waste disposal. In fact, automation is a much more important cause of job loss than environmental protection is. And while extractive industries tend to be geographically concentrated, jobs arising out of energy conservation, renewables, and recycling are likely to be more evenly spread.

The overall changes—for industry and for the world—will be profound. Shifting to an environmentally sustainable society is a task equal in its scope, complexity, and ultimate importance to the profound transformations wrought by the Industrial Revolution. What is different now is that humanity already has at its disposal many of the tools and much of the knowledge required to make the transition. It still needs to gather the vision and political will to embrace the policies that can save the planet.

10

Strengthening Global Environmental Governance

Hilary F. French

The past year has been marked by unparalleled activity in environmental diplomacy. Unlike the headline-grabbing proclamations of ecological concern heard from world leaders a few years back, recent efforts have been accompanied by little fanfare. But in negotiations around the globe—from Geneva to Nairobi to Washington—diplomats have started the hard work of forging a global consensus on the pressing environmental issues of our time.

Negotiations are now under way on two major treaties—one to address the accelerating loss of the earth's biological diversity and the other to combat global warming. Discussions have also begun on a statement of principles covering forest management that may lay the groundwork for an actual treaty. Meanwhile, diplomats are busily preparing for the United Nations Conference on Environment and Development (UNCED), dubbed the Earth Summit, to be held in Brazil in June 1992. This meeting, which commemorates the twentieth anniversary of the Stockholm U.N. Conference

on the Human Environment, will review all the major environmental and development challenges facing the world community and adopt an action plan on sustainable development.¹

International cooperation on environmental protection is of course not new: as far back as 1872 Switzerland made an effort to establish a European organization to protect the nesting sites of migratory birds. But the scale of international negotiations is growing rapidly. More than 150 environmental treaties have been adopted, the majority since 1970. They include accords on diverse subjects—including acid rain, ocean pollution, endangered species protection, hazardous wastes export, and the preservation of Antarctica. As the current flurry of diplomatic activity indicates, environmental issues have in the space of a few years become a central feature of international relations. (See Table 10-1.)²

At the institutional level, the United Nations Environment Programme (UNEP), created at the 1972 conference

Table 10-1. Selected Environmental Agreements

Agreement	Description
Convention on Long-Range Transboundary Air Pollution	Adopted in Geneva in 1979, after negotiations under the auspices of the U.N. Economic Commission for Europe. Strengthened joint research and monitoring programs. A July 1985 sulfur dioxide protocol calls for a 30-percent reduction in emissions or their transboundary flows from 1980 levels by 1993. A nitrogen oxides protocol in November 1988 calls for a freeze on emissions at 1987 levels in 1994, as well as further discussions beginning in 1996 aimed at reductions. A volatile organic compounds protocol may have been ready for signing by the end of 1991.
London Dumping Convention	Adopted in 1972. Negotiations convened by the U.N. International Maritime Organization; 66 countries are now party to it. Originally outlawed dumping radioactive and other wastes deemed "highly dangerous" into the ocean. A recent amendment outlaws dumping of all forms of industrial waste by 1995; a ban on ocean incineration of wastes is to take effect by the end of 1994.
Convention on International Trade in Endangered Species of Wild Flora and Fauna	Adopted in 1973; 108 parties. Aims to protect endangered species by restricting their import and export and trade in products made from them. It prohibits entirely trade in species threatened with extinction, as in the ban on the ivory trade imposed in 1990.
Commercial Whaling Ban	A 1982 amendment to the 1946 International Convention for the Regulation of Whaling negotiated by the International Whaling Commission. Bans all commercial whaling.
Basel Convention	Adopted in March 1989. Treaty calls for international adherence to "prior informed consent" for hazardous waste export. It has been signed by 53 countries, but ratified by only 13; 20 ratifications are needed before it will be legally binding.
Antarctica Treaty	Signed in 1959 by 12 nations. Signatories agreed to put aside conflicting national claims to the continent and jointly manage it "in the interests of all mankind." A 1991 agreement prohibits all mining exploration and development for 50 years and protects wildlife, regulates waste disposal and marine pollution, and provides for increased scientific monitoring of the continent.

SOURCE: Worldwatch Institute, based on sources documented in endnote 2.

in Stockholm, has worked to catalyze and coordinate environmental action within the United Nations. Many other U.N. agencies and international institutions, including the United Nations Development Programme (UNDP), the In-

ternational Fund for Agricultural Development, and the U.N. Population Fund are also involved to some degree in programs promoting sustainable development.³

But despite limited advances, the

overall state of the global environment continues to deteriorate at an alarming rate. (See Chapter 1.) Existing treaties are often not adequate to the tasks they are charged with. For some critical environmental threats, no treaty exists at all. UNEP, though it has done a laudable job of fulfilling its limited mandate, does not in its current form have the institutional stature to marshal the needed quantum leap in cooperation.

If the world is to effectively address the pressing environmental problems on the global agenda, stronger international governance will be needed. Countries find themselves simply unable to take effective national action on problems that transcend boundaries. No matter how much nations try to protest, there is no avoiding the fact that national sovereignty—the ability of states to control events within their territory—is undermined in a world where borders are routinely breached by pollution, financial flows, refugees, and other forces. Environmental decisions made in one country also influence others through international trade.⁴

Stronger international governance will evolve both from better utilization of existing mechanisms and, over time, through the development of new ones. But strengthening international institutions does not necessarily imply the creation of one global super agency. Rather, innovations are likely to arise from disparate sources. For instance, the small offices charged with implementing a given treaty often forge valuable new governing techniques. Nongovernmental organizations (NGOs) are also at the forefront of international mobilizing: several, most prominently Friends of the Earth, Greenpeace, and the World Wide Fund for Nature, are far-flung organizations responsive to global constituencies rather than to parochial national interests.

The tasks delegated to international

institutions by governments are best limited to those that absolutely require cooperation for resolution. Explained Maurice Strong, Secretary-General of UNCED, in a 1987 speech: "The prime organizing principle for any system of governance should be that responsibility for every activity should be vested in the level closest to the people affected at which it can be managed most effectively." He suggests that by this criteria the number of issues dealt with at the global level would be far more limited than those on the currently overcrowded United Nations agenda.⁵

Though economic and environmental interdependence continue to accelerate, international institutional development is not keeping pace. Existing treaties and institutions represent an embryonic attempt to create the international mechanisms that are required. Governments must use them as a springboard for the more fundamental governance changes that are needed to set the world on a sustainable course.

GUARDING THE COMMONS

In his seminal 1968 essay "The Tragedy of the Commons," ecologist Garrett Hardin compared the international environmental predicament with the degradation of medieval common grazing lands—individual herders pursued short-term economic gains to the detriment of everyone's long-term future, knowing that one individual's efforts to conserve the resource base would be overwhelmed by the actions of others. Concluded Hardin: "Ruin is the destination toward which all men rush, each pursuing his interest in a society which believes in the freedom of the commons. Freedom in a commons brings ruin to us all."⁶

The world is now facing for the first time the challenge of devising international rules to govern the global commons. One of the most difficult tasks is defining what parts of the planet fall into this category: countries are understandably reluctant to cede sovereignty on what they have long considered national resources. Among the hundreds of treaties that regulate portions of the global commons, two ambitious efforts stand out—the Law of the Sea adopted in 1982 and the Montreal Protocol on ozone depletion, completed in 1987 and revised in 1990. Both offer important lessons for future negotiations.

The Law of the Sea treaty was the product of more than a decade of often contentious negotiations. Coastal nations had been laying ever growing claims to their territorial waters in order to exploit energy reserves, mineral resources, and fisheries. This competed with other interests vital to some countries, including the traditional freedom of the seas for navigation and the need to cooperate in controlling pollution and overfishing.⁷

The Law of the Sea treaty was the product of more than a decade of often contentious negotiations.

The final bargain preserved freedom of navigation subject to some limited controls even within nation's territorial waters—defined as those within 12 miles of their shores. Coastal nations were granted the right to manage all economic activities such as fishing and oil and mineral development within a 200-mile "exclusive economic zone." As a result, coastal and island countries in the world now control access to the resources contained in 40 percent of the ocean,

with just six countries (Australia, Indonesia, Japan, New Zealand, the Soviet Union, and the United States) holding claim to a third of the total. The Law of the Sea has for this reason been called the "greatest territorial grab in history" by some critics. Seen in a more positive light, however, the 200-mile zone was considered essential to conserving and managing fisheries that would otherwise be subject to uncontrolled foreign and domestic harvesting.⁸

In return for recognizing their territorial and economic rights, the treaty obligated coastal nations to protect the marine environments in areas under their control. Those ratifying the convention are expected to participate in treaties aimed at controlling diverse sources of ocean pollution including discharges and runoff from cities and agriculture, ocean dumping of wastes, releases from boats, oil exploration and drilling, mining, and air pollution deposited in the ocean.⁹

The Law of the Sea treaty provided a foundation for eventually negotiating separate agreements under the auspices of the International Maritime Organization and UNEP. To date, international treaties cover ocean dumping, vessel discharges, transportation of oil and hazardous materials, and emergency response to accidents. Four regional agreements cover land-based sources of pollution such as sewage and agricultural runoff. In addition, UNEP has developed an extensive regional seas program that encourages the negotiation of legally binding conventions for these shared resources.¹⁰

Another major element of the Law of the Sea bargain was an agreement to regard the high seas—outside the 200-mile territorial limit—as the "common heritage of mankind." The only similarly recognized piece of the earth is the continent of Antarctica, which 12 countries agreed to safeguard for the benefit of all

humanity under the Antarctica Treaty of 1959.¹¹

The Law of the Sea convention also called for the creation of an International Seabed Authority that would cooperatively mine the deep seabed for minerals if it became economically attractive to do so. As part of the bargain, industrial countries agreed to facilitate the transfer of some of the needed mining technology. The treaty provided for a licensing system for private mining activities, with a share of the revenues to go to developing countries in recognition of their stake in the global resource.¹²

At the time, the seabed provisions were hailed by many observers as a historic jump in international cooperation. They were seen by developing countries as a means to move toward a "New International Economic Order" that would lift them out of poverty through mandatory technological and financial transfers. But the seabed provisions proved a major roadblock to worldwide acceptance of the treaty. Several industrial countries refused to sign or ratify the convention unless changes were made in these sections. The position of the U.S. government was the biggest obstacle. Rather than trying to negotiate changes that would make the treaty acceptable, the Reagan administration came to office with an inflexible stance that antagonized many other countries and eliminated any possibility of consensus.¹³

Nearly 10 years after its completion, the treaty has still not entered into force because only 50 of the needed 60 countries have ratified it. Ironically, the seabed mining provisions have proved to be something of a period piece. No deep seabed mining is likely to take place for several decades, at least, and the ocean floor is deemed unlikely to ever become the pot of gold once envisioned. Efforts at the moment are focused on reaching a compromise that would be acceptable

to the holdouts so that the convention can be ratified.¹⁴

Despite the treaty not being officially implemented, the seemingly endless Law of the Sea negotiations were not in vain. Many treaty provisions are being observed as customary international law around the world, with positive effects on fish stocks, ocean pollution, and freedom of the seas. And the treaty established some useful precedents for future environmental diplomacy. The principle that the ocean is the "common heritage of mankind" may be relevant to other efforts to manage shared resources and territories, and the provision of U.N. financial and technical assistance to help developing countries protect coastal areas established the need to link obligations with the means to meet them, though the amounts provided are far from adequate.¹⁵

One aspect of the Law of the Sea that will only be put in practice if the treaty enters into force is its pathbreaking dispute settlement provisions. Countries are offered a range of options for settling conflicts. In some instances, national courts have jurisdiction but are required to be open to foreign claims. In other cases, international procedures apply, ranging from informal consultation through binding judicial proceedings. A Tribunal of the Law of the Sea to be set up in Hamburg would be the option of last resort. In a special Seabed Chamber, corporations and individuals would have standing. The distinctive feature of the system is that it is mandatory: parties would be required to accept the judgment of this international court, rather than just having the option of referring disputes to it.¹⁶

Unlike the somewhat tarnished image of the Law of the Sea, the treaty to protect the ozone layer is widely hailed as a landmark in environmental diplomacy. Evidence mounted in the early eighties that the ozone layer—which protects the

earth from harmful ultraviolet radiation that can cause skin cancer, damage marine life, and lower agricultural yields—was being depleted by reactions high in the atmosphere involving chlorine- and bromine-containing industrial chemicals such as chlorofluorocarbons (CFCs) and halons. As a first international step in responding to the threat, 20 nations, including most of the primary CFC-producing countries, signed a convention in Vienna in March 1985. It created a mechanism for cooperation on research and data gathering and included a political commitment to take action at a later date.¹⁷

In September 1987, after more alarming scientific evidence had been gathered, the Montreal Protocol on Substances that Deplete the Ozone Layer was signed. It called for emissions of CFCs in industrial countries to be cut in half by 1998, and for halon emissions to be frozen at 1986 levels by 1992. Developing countries were granted deferrals to compensate for their low levels of production. The treaty also restricted the purchase of CFCs from nonsignatories to prevent shifts of production in order to escape regulation. The U.S. Environmental Protection Agency (EPA) estimated that the emissions reductions called for by the protocol would prevent 1.2 million cataract cases around the world, 137 million cases of skin cancer, and 27 million skin cancer deaths—a significant achievement by any measure.¹⁸

In the world of international diplomacy, which moves at a notoriously glacial pace, the ozone negotiations were extraordinarily speedy. In little more than two years the world community had moved from the commitment-free Vienna Convention to a treaty binding countries to a system of international regulation that would affect powerful commercial interests and products widely used in everyday life. Just over a

year after the Montreal Protocol was adopted—on January 1, 1989—it had received enough ratifications to enter into force.¹⁹

One strength of the protocol was its provision for further updating as new scientific information became available. The ink was barely dry on the treaty when worrisome new evidence did indeed emerge, confirming that ozone depletion was already taking place over the heavily populated northern hemisphere. Furthermore, the new data suggested that the atmospheric models underlying the Montreal Protocol had actually underestimated the pace of depletion—dangerous amounts of ozone loss would occur even if it were fully implemented by all nations.²⁰

The single most important ingredient in the ozone treaty's success was the creation of the fund to help developing countries.

Faced with this disturbing information, the parties to the protocol decided to return to the negotiating table. After a series of meetings, 93 nations agreed in June 1990 to stop using CFCs altogether by 2000 and to extend the treaty's provisions to several previously unregulated ozone-depleting chemicals. Developing countries, led by India and China, argued forcefully that it was unfair of industrial countries to expect the Third World to incur the costs of switching to CFC substitutes to solve a problem they had little role in creating. After intensive bargaining and a last-minute policy reversal by the United States, participants agreed to establish a fund of up to \$240 million to help developing countries purchase CFC substitutes. China and several other developing countries subsequently ratified the convention, al-

though as of November 1991 India had not.²¹

In *Ozone Diplomacy*, U.S. Chief Negotiator Richard Eliot Benedick distills several "elements of success" from the unusually swift ozone saga. He underscores the important role played by the international scientific community, UNEP, and international NGOs such as Friends of the Earth. They were able to form a consensus for action that transcended parochial national interests. Early U.S. leadership was another important factor. According to Benedick, the United States consistently urged the reluctant Europeans, Japanese, and Soviets to act. He attributes this to an informed and vocal public, which had already succeeded in forcing the passage of the strictest national ozone protection legislation in the world. American industry, in turn, came to favor international regulation over national laws in order to level the global playing field.²²

Perhaps the single most important ingredient in the treaty's success was the creation of the fund to help developing countries make the transition to CFC substitutes—a lesson that can be applied to treaties on biodiversity and climate and to the Earth Summit. Key developing countries would not have supported the treaty had its call for technical and financial assistance not been backed up in this way. Growing CFC use in nonsignatory nations could then have overwhelmed reductions by treaty signers. Unfortunately, the fund is off to a slow start, with only \$22 million of the \$53 million pledged for 1991 having been raised as of late September 1991, and no projects under way yet.²³

Though the ozone agreement is a pin-nacle in international environmental diplomacy, the world community cannot afford to become complacent. Indeed, new scientific information released in 1991 showing depletion proceeding twice as fast as expected over parts of the

northern hemisphere has spurred a call to revise the treaty once more. Possible steps include accelerating the phaseout of CFCs and more tightly controlling some of the proposed CFC substitutes that, though less damaging, have themselves been identified as ozone depleters. Parties to the treaty are still considering how to ensure that countries honor their commitments, though they have decided that assistance from the ozone fund depends on good-faith efforts to comply with the treaty's terms.²⁴

FORGING STRONGER TREATIES

Weighed against the magnitude of the environmental problems facing the world, the experience to date with global environmental governance is not encouraging. Treaties often take a long time to negotiate, ratify, and enter into force. The need to accommodate the diverse opinions and conditions of more than 100 nations can lead to a least common denominator effect, in which the treaty reflects the desires of the most reluctant party to the negotiations. And even the relatively weak treaties now in force rarely include effective means of ensuring that countries meet their obligations.

The treaty-making process can be improved in a variety of ways. One is to rely on "soft law"—declarations and action plans that do not need to be formally ratified and are not legally binding but that help create an international consensus and lay the groundwork for the negotiation of binding treaties later. This approach has been used successfully in many areas, such as UNEP's regional seas program. The action plan that is to emerge from the Earth Summit, known

as Agenda 21, falls into this category.²⁵

If a binding treaty is deemed the best route, a variety of models exist. Among international relations specialists, the convention-protocol approach followed in the ozone talks and the comprehensive strategy of the Law of the Sea negotiations are often viewed as competing archetypes. The traditional view cites the relative success of the ozone treaty as a vindication of the step-by-step negotiating method. Although early international discussions on climate change focused on negotiation of a "Law of the Atmosphere" analogous to the Law of the Sea, the proponents of the ozone model triumphed and the discussions are now following the convention-protocol model. To those frustrated with this incremental approach, Richard Benedick points out that "premature insistence on optimal solutions could have the unintended effect of bogging down the negotiations and prolonging the entire process."²⁶

It is important that treaties include provisions to facilitate updating should new scientific information become available.

But there is also a danger that letting countries sign a framework treaty without requiring them to make any firm promises provides an easy political out that can delay progress toward actual reductions. Notes Jim MacNeill, the former Secretary General of the World Commission on Environment and Development: "An empty framework convention enables our leaders to cop out of these discussions and gain credit for doing so. . . . It is much like an author going to a publisher with a table of contents, asking for an advance and getting it on the promise that his children or

grandchildren will write the narrative."²⁷

In addition, segmenting a problem into manageable chunks—as protocols do—can reduce the opportunities for imaginative bargaining between countries that might improve the ultimate outcome. James Sebenius of Harvard University's Kennedy School of Government points out that in the climate negotiations a forested country like Brazil might readily agree to an energy efficiency protocol but refuse to sign one on forestry. Similarly, the United States—one of the world's biggest energy consumers—might be willing to commit to a forestry protocol but not an energy one. In this case, little progress would have been made toward actually solving the problem. However, if the two protocols were part of one process, deals could be struck that make it advantageous for each party to take some action in areas it would normally resist. Sebenius argues for a compromise that allows for imaginative bargaining without being so complex as to bring the process to a standstill.²⁸

The success of the ozone negotiations can be linked more to factors such as the development of profitable substitutes for CFCs and mounting scientific information about the threat than to its convention-protocol approach. Similarly, the last-minute accession to power of the Reagan administration and the revolutionary nature of some of the provisions of the Law of the Sea probably account more for its failure to enter into force than the treaty's comprehensive nature, so it would be unwise to dismiss it as an altogether faulty model for future negotiations. Both experiences are relevant to the challenges ahead.

Whatever the model, it is important that treaties include provisions to facilitate updating should new scientific information become available or political conditions change in a way that would

make a stronger agreement possible. Annexes, for example, can be revised without having to ratify a whole new treaty. Instead, they are automatically binding unless one party to the treaty expressly objects. The decision in 1990 to phase CFCs out entirely required only an adjustment to the Montreal Protocol's annex, which meant that it took effect immediately with no need for a time-consuming ratification process. Another way to speed the process along is to require that any country signing a treaty be bound to accept at least one future protocol. This makes it possible to agree to a treaty expeditiously while still holding the signatory to a concrete obligation. Use of such tools is being considered in the talks on global warming.²⁹

An additional approach is to gradually delegate to an international agency the power to set environmental standards. These can then be adapted in response to changing conditions. Already, some technical agencies such as the International Telegraph Union have this power, as does the International Labour Organisation (ILO). The governing bodies charged with implementing some environmental treaties, such as marine pollution accords and the Antarctica Treaty, also have regulatory responsibilities. In some cases, these bodies, which were set up to implement treaties and which are composed of representatives of member states, can agree to set standards by two-thirds majority rather than unanimous vote. This helps overcome the least common denominator problem.³⁰

However, the key to the success or failure of most treaties lies not in the negotiation process but in the internal political dynamics of participating nations and in public opinion. Countries or groups of countries often set the ball rolling by making voluntary pledges. An informal "30-percent club" of European countries that committed to a 30-percent reduction in sulfur dioxide emissions

helped create the political will for an acid rain agreement. In the global warming talks, Germany spurred progress by vowing to cut its carbon emissions 25 percent by 2005. This enabled the European Community (EC) to commit to stabilizing carbon emissions by the year 2000, and it put pressure on the United States to follow suit.³¹

On a more negative note, political scientists give the term "blocking coalition" to groups of nations that can prevent the creation of strong treaties because they together account for the preponderance of the problem. Sometimes, only one country—a "veto state"—can scuttle an agreement. Reversals of position by this government can then become critical. With the acid rain issue, for example, Germany was a veto state until a sudden change of heart in response to new scientific information pumped life into long-stalled negotiations. In the bargaining over a ban on commercial whaling, Japan long played this role. In the global warming talks, the United States wears the veto-state mantle. The priority then becomes influencing the veto state or the members of the blocking coalition, through international political persuasion and domestic public pressure.³²

IMPROVING COMPLIANCE

Reaching an agreement is only half the battle. The next major challenge is seeing that countries stand by their signatures once a treaty is in effect. Unlike national governments, international agencies do not have police powers. Most treaties do not even stipulate any sanctions. There is a paucity of data on compliance with existing environmental agreements, so nobody really knows to what extent signatories are keeping their