International Environmental Negotiation: Insights for Practice

Executive Report (ER-21)

Edited by Bertram I. Spector
The Processes of International Negotiation Project

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New IIASA Book from Sage Publications

International Environmental Negotiation
Gunnar Sjostedt, editor

In Fall 1992, Sage Publications will publish this book sponsored by the Processes of International Negotiation Project at the International Institute for Applied Systems Analysis. The table of contents is presented below.

International Environmental Negotiation investigates the process by which critical environmental issues have been negotiated from multiple perspectives. Based upon a conceptual framework that attempts to distinguish these types of negotiations from others, nine cases of recent bilateral and multilateral environmental negotiations are examined in detail. Five analytical chapters tie together the lessons learned from these cases to determine how international environmental negotiations are typical or unique. These concluding chapters provide insights for the negotiation practitioner, international organizations, third party mediators, nongovernmental organizations, and researchers.

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Queries regarding this book or other related IIASA publications should be addressed to Mr. Robert McInnes, IIASA Publications Department, A-2361 Laxenburg, Austria. Book orders should be placed directly with the publisher: Sage Publications, 2455 Teller Road, Newbury Part, California 91320, USA **(Phone: 805-499-0721;** Fax: **805-499-0871).**

Foreword

Environment and development issues are beginning to receive the attention they deserve from a global audience that, for the most pan, is now willing to confront these problems directly. It is certainly high time, since, in many cases, resolution of these issues is acknowledged to be a matter of global survival.

International negotiation has become a principal approach in dealing with global and transboundary environmental disputes and problems. To date, most environmental issues have been addressed to some extent through negotiation processes, though with varying degrees of success. Certainly, the hallmark of environmental negotiations will be the United Nations Conference on Environment and Development (UNCED) scheduled for June 1992 in Rio de Janeiro.

This Executive Report highlights some of the results of a recently completed two-year analysis of international environmental negotiations conducted by a distinguished study team of diplomats, international civil servants, and scholars, and sponsored by the Processes of International Negotiation (PIN) Project of the International Institute for Applied Systems Analysis. In-depth analyses of eight major negotiations were performed – including the talks on ozone depletion, global warming, the transport of hazardous materials, acid rain, sea pollution, inland water pollution, desertification, biological diversity, and nuclear pollution -- and lessons were drawn for negotiators and diplomats, international organizations, nongovernmental organizations, third party mediators, and researchers. Excerpts from that analysis are presented here. A complete description of the study and its findings are published in a new IIASA book, ***International Environmental Negotiation***, edited by Gunnar Sjöstedt and issued by Sage Publications.

This Executive Report accents the conclusions, insights, recommendations, and actions derived from this study that can benefit negotiators and policy makers in ongoing and future environmental negotiations. Whether or not the UNCED is successful in achieving its objectives, the lessons identified in this study can support practitioners participating in future environmentdevelopment negotiations. We believe that the conclusions reached in this research effort can contribute to more efficient negotiation processes and more implementable solutions to sustainable development issues.

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This study was conducted by a group of 17 negotiators, researchers, and international civil servants convened under the auspices of the Processes of International Negotiation (PIN) Project of the International Institute for Applied Systems Analysis. The coordinator of the study was Gunnar Sjöstedt (The Swedish Institute of International Affairs). The other participants were Richard E. Benedick (World Wildlife Fund, United States), Christophe Dupont (C.R.C. Conseils Associes, France), Guy Olivier Faure (Department of Sociology, Sorbonne University, France), Willy Kempel (Ministry of Foreign Affairs, Austria), Victor A. Kremenyuk (Institute for USA and Canada Studies, Academy of Sciences, Russia), Winfried Lang (Ministry of Foreign Affairs, Austria), Michael Mortimore (Consultant, United Kingdom), Jeffrey Z. Rubin (Department of Psychology, Tufts University and Program on Negotiation, Harvard Law School, United States), James K. Sebenius (John F. Kennedy School of Government, Harvard University, United States), Roderick W. Shaw (Global Environmental Security Project, International Institute for Applied Systems Analysis, Austria), Bertram I. Spector (Processes of International Negotiation Project, International Institute for Applied Systems Analysis, Austria), Patrick Szell (International Environmental Law Division, Department of the Environment, United Kingdom), John Temple Lang (Commission of the European Communities, Belgium), Peter S. Thacher (World Resources Institute, United States), Oran R. Young (Institute of Arctic Studies, Dartmouth College, United States), and I. William Zartman (The Paul H. Nitze School of Advanced International Studies, The Johns Hopkins University, United States). Drs. Faure, Kremenyuk, Lang, Rubin, Sjöstedt, Spector, and Zartman served as the Editorial Committee for the study effort. Dr. Spector edited this Executive Report.

Comments in the Executive Report represent the views and opinions of its authors, and do not necessarily present the views and opinions of the institutions with which they are affiliated, or the International Institute for Applied Systems Analysis or its National Member Organizations.

International Environmental Negotiation: Insights for Practice

Introduction

A fundamental requirement for achieving successful solutions to the many environmental and developmental issues facing the global community is the design of a new and more effective approach to the process of international negotiation. This approach should start with a logical and open analysis of the situation and provide options for managing the issues. The approach must also provide a negotiation process based on the premise that a negotiated solution makes winners of all parties. This Executive Report provides the results of a two-year study focused on developing and improving current approaches to international environmental negotiation.

In particular, this report excerpts conclusions and insights from the larger study that can be supportive of practitioners of international environmental negotiations, including participants from various backgrounds -- diplomats, policy makers, international organizations and civil servants, intergovernmental organizations, nongovernmental organizations, and third party mediators. These results are grouped into five categories which represent fundamental building blocks of the negotiation process:

- Actors: Who are the major participants?
- Structure: How do participants relate to each other?
- Strategies: How do participants try to get what they want?
- Process: What happens during negotiations?
- Outcome: What are the results?

Who are the Major Participants?

Governments – Coordinating a Multiplicity of Interests

Many different ministries may be involved in setting a national position. These could include, besides the obvious ministries of foreign affairs and environment, departments responsible for science and technology, industry, finance, trade, defense, foreign aid, planning, energy, agriculture, transport, and others. As these ministries have different constituencies and interests, there are likely to be considerable internal conflicts before a national delegation can advance a firm position to the outside world. In the interagency process, one government department will generally assume the lead role. Many of the ministries may also insist on being represented at the international negotiations, which can lead to excessively large national delegations.

In addition to the executive branch, national legislatures also play an increasingly important role. Parliamentary hearings are an especially useful forum for airing scientific theories and exploring conflicting economic and social interests. New mechanisms have arisen linking parliamentarians of North and South on environmental issues, providing forums for mutual education, exchange of information, and coordinated lobbying on specific issues such as climate change or biological diversity. These bodies range from subcommittees of a large, formal, and traditional institution (the

Interparliamentary Union) to smaller groups parliamentarians for Global Action) to informal ad hoc networks or conferences. All of these bring national parliaments and parliamentarians closer to the actual process of intergovernmental environmental negotiations than ever before.

For governments to face up to the new environmental challenges, they must reconcile a multiplicity of interests within their own borders. Bargaining must take place between these interest groupings to arrive at a single national policy -- usually a compromise position. ***If these intra-governmental negotiations are conducted so that each party perceives some benefit, a single national policy will be easier to pursue and the final internationally negotiated agreement will be more readily complied with in the longer term.***

The Scientific Community – Building Bridges to Policy Makers

It is essential that an international scientific consensus be built that can agree on basic parameters and narrow the ranges of uncertainty to ensure the success of negotiations. In recent years, as demonstrated by their work on the ozone-layer and global-warming issues, an international network of cooperating scientists and scientific institutions has developed as a major new actor on the scene. They have been aided in this process by the catalyzing efforts of such institutions as UNEP, the World Meteorological Organization (WMO), and the International Council of Scientific Unions (ICSU).

In effect, there now exists a community of scientists from many nations, committed to scientific objectivity and welcoming cooperative research, transcending the narrow political and commercial interests of sovereign states. This development profoundly affected the ozone negotiations, operating to counterbalance the industrial lobby. In this process, the scientists collaborated closely with key government officials, assuming a new responsibility for the implications of their findings for policy options. It is important not only that governments provide adequate financing for their scientific research, but that they heed the resultant findings.

Science, however, can be another area of potential North–South tension. While a handful of developing countries have first-rate scientific establishments, the preponderance of scientific research on environmentally related subjects is concentrated in the North. This is accentuated by the panoply of instrumentology and capital investment required for the monitoring and analysis that goes with the modern study of the environment: supercomputers, satellites, sophisticated laboratories.

Very few scientists from developing countries were involved in the international exercises accompanying the ozone negotiations. Special efforts were undertaken to involve more in the Intergovernmental Panel on Climate Change (IPCC). *Looking* ahead, ***a persistent theme from Third World diplomats is the need to build into future environmental treaties provisions for training, technical assistance, and scientific capacity building in developing countries, to permit them to function as more equal partners in this domain.***

Secretariats – Influential Third Parties

International organizations and their secretariats perform functions that, in many cases, are similar to those of third party mediators. For instance, the secretariat may supply objective information needed to clarify issues, summarize proceedings, and undertake systematic comparison of key elements in national position papers. Such activities may help negotiating parties to find common ground.

Still, the role of secretariats is fundamentally different from that of a true mediator. One reason is that the secretariat often does not retain the necessary freedom of action. Normally, the secretariat functions as a mediator at the request of nations who belong to the secretariat's mother organization. Under such circumstances, the secretariat often has difficulties intervening at will when it considers the time to be right. This is a serious handicap, considering that timing is crucial for successful mediation intervention. Moreover, when the secretariat becomes an active and integral part of the negotiation, it may lose its status as an impartial mediator in the eyes of the national actors.

A ripe moment can be created by an effective mediator, rather than merely being sought out or awaited. Secretary General Maurice Strong appears to have created a ripe moment when he opened meetings at the 1972 Stockholm Conference by presenting a list of marine pollutants ranked by the severity of their impact. What he achieved, in effect, was to remind the parties to these negotiations about the severity of the threat posed by marine pollution to the world. In so doing, he succeeded in engendering some sense of the ripe moment, rather than merely waiting for it to occur on its own.

Mediators may wish to make use of opportunities for informal exchange as a way of getting things unstuck. If the formal process of offer and counteroffer, as it takes place at the negotiating table, is being used to state extreme positions in public, and the disputants have reached an impasse, it may be wise to create opportunities for more informal arrangements. UNEP Executive Director, Mustafa K. Tolba, appears to have done just this during the Montreal Protocol negotiations on the depletion of the ozone layer. Tolba made extensive use of "informal consultations" designed to help narrow the gap between the divergent views of negotiators on central issues, and accomplished this ***away*** from the plenary session.

Nongovernmental Organizations (NGOs) – Catalysts, Monitors and Educators

Mobilizing the right actors at the right time is a problem of great significance. In many environmental cases, effective negotiations were started too late in relation to the seriousness of the problem. The actors who should have been mobilized were not. It would have made a great difference, for example, if the negotiations on the ozone layer had been started and had achieved their initial results 10 or 15 years earlier. This is only one area in which NGOs can make important contributions to environmental negotiations in the future. ***They*** may ***not only mobilize support for the negotiations generally, but also contribute to the structuring of the agenda by helping authorities set priorities.***

A new task for NGOs, which will probably increase in importance in the future, is to assist in the implementation of agreements in the area of environmental problems. One way that this may be accomplished is by actual supervision of governmental activities. The root cause of many environmental problems can be traced to the social behavior of individuals or to their common lifestyles. ***Therefore, educational programs can be expected to play an important role in the implementation process by recommending modified behavior and lifestyles. NGOs may become important channels for such crucial educational programs.***

The rate of participation of NGOs in environmental negotiations has increased in recent years. This development is particularly evident in the prenegotiation process leading up to the United Nations Conference on Environment and Development (UNCED) in Brazil in 1992. At the meeting of the preparatory committee in Nairobi in August 1991, one of the most contentious issues causing highly intensive discussions was the role of NGOs in the UNCED process. Influential NGOs demanded increased access to, and participation in, the negotiations; these requests were largely obliged. It is

interesting to note, however, that the NGOs becoming involved in the UNCED process, for the most part, represent interests of the developed countries. Actually, a strong constellation of developing countries resisted the increased presence of NGOs, as such organizations in the Third World in the 1990s generally favor environmental concerns before the needs of development.

Mobilization of the Public

The importance of mobilizing the general public in support of national negotiating objectives is demonstrated, for example, by United States initiatives concerning the ozone problem – by the creative use of the media, press conferences, speeches, television, and radio, as well as of reaching out to foreign constituencies by encouraging US environmentalists to establish contacts with their colleagues overseas.

On the other hand, policy makers may become complacent if their publics do not lobby them to act on vital environmental issues. Publics will not become engaged if they are not informed of potential threats. Educational programs are required, organized by international organizations and targeted at societal organizations. ***Their objective should be to increase the general awareness of the existing threats and opportunities. With such information in hand, citizens may force national actors to mobilize for negotiations.***

Nature – Defending the Undefended

In the case of the biological diversity negotiations, threatened species of plants or animals cannot defend their own interests, however important they are in a future-oriented ecological perspective. These and other common interests of a similar kind need representatives. To a large extent, that role has been performed until now by national representatives speaking from an idealistic platform. Dependence on uncertain idealism is very shaky ground on which to base future global problem solving on biological diversity or any other environmental issue. ***Yet,*** consciousness raising is an important and necessary aspect of mobilizing actors.

It is essential to search for better methods of bringing undefended collective environmental interests into the multilateral negotiation process. Several approaches can be explored:

- ***Establish rosters of independent and highly qualified experts by means of international agreement in some appropriate international organization.*** From this roster, one expert or a team of experts could be selected to serve as representatives for undefended or weakly defended environmental interests. These representatives should not play the role of a mediator or that of a secretariat servicing a particular negotiation round. Neither should they have responsibilities to national delegations. Such representatives would constitute a new kind of actor in environmental negotiations truly representing collective global interests.

- ***Develop institutional structure and administrative support to epistemic communities.*** Such transnational groups have emerged to function as driving forces in several negotiation processes, notably the negotiations on pollution in the Mediterranean and the ozone problem.

- ***Enhance the access of nongovernmental organizations and selected international interest groups info the negotiation process.*** In many past negotiations, national governments as well as the leadership of international organizations have been reluctant to permit such representation at the negotiation table. One reason is that some nongovernmental organizations (NGOs), such as Greenpeace, have been skillful in mobilizing national and international opinion in the area of environmental problems. Therefore, the participation of such NGOs in international environmental negotiations has added an element of uncertainty. Notably, NGOs have been capable of upsetting tentative agreements by revealing the real tradeoffs of governments or by criticizing a government or policymaker for taking the wrong position in a negotiation.

How do Participants Relate to Each Other?

Unequal Resources – Asymmetry between North and South

More so than in many other types of negotiation, environmental talks exhibit asymmetrical qualities. Wide differentials can and do exist in accessibility to scientific and technological information, for example. The countries of the Noah usually have the resources at their disposal to gather and analyze data, thus giving them a definite advantage in terms of examining possible solutions and trading off benefits against likely impacts on domestic interests. In an age when information is power, this differential gives the North a definite advantage over the South. Asymmetry in information resources was a contributing factor to the more passive participation of Southern countries at the Vienna talks on nuclear accidents.

Moreover, such asymmetry yields dependencies for information that can easily foster suspicion. This point was pertinent especially in the case of the negotiations concerning the transboundary movement of hazardous waste, which pitted the Noah against the South in sharp relief. As victim, the developing countries were highly dependent on the industrialized nations for information during the negotiations and were concerned that the final resolution of the Basel Convention would not go far enough in banning transboundary movement. The resulting actions of the African countries are particularly telling. As a bloc, the African states adopted a joint declaration highlighting issues of critical interest to them which they were fearful would not receive appropriate treatment at Basel. In addition, none of the African countries signed the Final Act of the Basel Convention on the spot.

Another dimension of asymmetry between actors in environmental negotiations deals with the use of strategy and power. The limited resources and assets of the South can easily lead to a prevalence of blocking strategies on their part. Sometimes, the only card held by the weaker party is to deprive the stronger actor of what it desires. While the South might not get what it wants out of the negotiation, it can see to it that the North will not get what it wants either. Though not an enlightened or progressive strategy, it may be the only way the weak can project its objectives to the strong. An example of this strategy was vividly portrayed by several large developing countries at the London meetings on ozone depletion who explicitly threatened to withhold their support for further restrictions on emissions if significant financial incentives were not forthcoming.

How can the negative effects of asymmetry be averted? Research strategies that focus on the creative distribution of information, common decision support systems, for example, or restructuring possible tradeoffs, might facilitate the process.

Issue Linkages – Reality and Implications

Tying environmental issues to development is a legitimate linkage. The imposition of environmental controls and regulations often does inhibit opportunities for economic growth in developing nations unless alternative or substitute technology is employed. But these technologies are generally more expensive and less available than the existing polluting options.

How does the linkage between environment and development change the calculus in international environmental negotiations? For one thing, it makes already complex issues more complex. Cost-benefit tradeoffs must be extended to deal not only with the differentials between increased regulation constraint and improved environment, but with halancing this regulation constraint and the demands of sustainable development as well. The design of a formula that encompasses these divergent interests into a positive-sum solution is indeed difficult to generate. Moreover, this issue complexity is likely to yield agreements that are difficult to ratify or implement due to the many domestic interests and stakeholders that are affected. Thus, the linkage between environment and development demands creative approaches; drawing upon precedent will not do.

The linkage of these two, often emotional and conflicting, objectives suggests a negotiation situation in which strategies and the use of power is more likely to be used in a negative fashion. Blocking strategies by developing countries that threaten noncompliance with new environmental controls are possible reactions to fears that their demands will not be satisfied.

A restructuring of the process of environmental diplomacy is required to cope with these linkage problems in negotiation. Current practice must be reformed to make the negotiation process dealing with environmental and development linkages more manageable.

Scientists and Diplomats – Reconciling Advice and Action

International environmental negotiations rely heavily on complex, though often uncertain, scientific and technical information. This is one of the major characteristics that distinguishes these types of negotiations from many other types of international negotiations. Scientists, engineers, technologists, and futurists must sit side by side with professional diplomats for the problems to be understood, solutions to be devised, and progress to be made.

The bridge between these two domains has yet to mature fully, leading to some problems and ambiguities. A major issue is one of negotiating about uncertain parameters. Rarely can it be said that all of the scientific issues being negotiated were completely understood and their future implications projected reliably. There are so many scientific parameters of environmental problems that are uncertain and so many correlations that reasonably cannot be stated as causal relationships, that the substance of what is being negotiated, what are appropriate tradeoffs, what are reasonable fallback positions, and what are effective outcomes can become rather nebulous.

At the same time, since the potential environmental consequences are often catastrophic, professional negotiators are left in the unenviable position of having to negotiate issues that are ill defined. The dilemma they face is negotiating in this state of uncertainty only to find later that the

problem was not as significant as once thought, versus delaying negotiation until substantial scientific results are available, only to find out then that irreparable damage has been done.

Another issue revolves around the unique perspectives of the scientific expert and the diplomat. The position of the expert is that the environmental problem is just that, a problem that one seeks to resolve logically in the most effective and efficient way possible. Diplomats, on the other hand, view environmental talks as situations where conflicting interests must be satisfied through compromise. Optimal technical solutions are only as good as the feasibility of concluding multilateral agreements that apply them.

The experts should not run the show, but, too, the professional negotiators must pay heed to the scientific implications of the alternative solutions. Negotiation outcomes that fall short of solving the true environmental problems or delay the process, though they are politically expedient, can be more damaging than no outcome at all.

Certainly, the two perspectives of the negotiation process mentioned above can be accommodated. ***fie role of the expert is to identify each scientific solution and how effective each is likely to be in resolving the environmental problem. fie role of the negotiator is to cobble an agreement that utilizes the solution sets at the most effective end of the continuum to maximize parochial interests, while offeringpositive payoffs to all other parties. The structuring of these roles and perceptions of the problem demand conscious attention to facilitate an effective partnership between scientist and diplomat.***

How do Participants Try to Get What they Want?

North–South – Demands and Responsibilities

In the new global environmental negotiations, developing countries are particularly sensitive about being forced to undertake obligations on behalf of environmental protection that could interfere with their economic growth. With a rising proportion of the world's population—already over 80 percent —oncentrated in the South, potential future emissions and effluents from the developing world under prevailing technologies could swamp any reductions undertaken by the industrialized North.

Developing nations stoutly maintain, however, that the industrialized countries have grown wealthy while, albeit inadvertently, polluting the global commons with greenhouse gases and toxic wastes; therefore, it is the responsibility of the North to pay for restoring the balances of nature on which future life on earth may well depend. In the short tun, the top priority in the South is to reduce poverty and raise standards of living, and if this means burning coal or cutting down tropical forests, with uncertain and probably adverse implications for the future, so be it. Developing country representatives insist that the only alternative to this course is for the South to be enabled, through new and additional financial assistance and technology transfer, to "leapfrog" over the polluting phase of the industrial-energy-agricultural revolution that began in the 18th century.

In the North, there is a concern that donor countries not commit themselves to open-ended new obligations for financial assistance or technology transfer over which they have no control. In the South, there is often a mistrust of the motivations of the North, a pervasive anxiety about being relegated indefinitely to a condition of "underdevelopment," and a jealous guarding of relatively recently acquired sovereign rights over their own natural resources. Yet there is general agreement that the wealthier countries must assume the lion's share of responsibility and that the South's concern

about equity and fairness is justified. ***It is the negotiators' task to translate these principles of equitable distribution into reasonable commitments.***

Strategy Ambiguity – Economic Push and Pull

National objectives related to environmental negotiations are often schizophrenic. They reflect a push–pull phenomenon. On the one hand, national actors emphasize the costs of regulation and the significant constraints that regulation will place on the domestic labor force and the economy in general. As a result, they tend to act cautiously so as not to upset these interest groups, biological conservation treaties being a case in point. On the other hand, negotiated agreements that constrain emissions, for example, can be a boon to industry that now can reap the benefits of newly created markets for control and substitute technologies. These opportunities attract national actors to negotiated agreements that might stimulate such technological development.

Many actors have not resolved this push-pull conflict in their national interests and objectives. This results in an ambiguous approach to internarional environmental talks that yields indecision and delay. In large part, this ambiguity can be traced to pluralism within national actors. As environmental issues are often emotional, domestic interest groups on all sides of the issue are stimulated and mobilized, complicating attempts to devise coherent national negotiating objectives. In the case of environmental degradation in the Sahel, for many of the nations involved, negotiation objectives are not ambiguous, but entirely unformulated. Little consensus can be found among government interests on environmental problems because of political volatility and competing objectives focused on economic development. Moreover, educated public opinion and differentiated interest groups on these issues simply have not matured in some societies.

A Tested Mechanism – The Single Negotiating Text

A useful device that promotes a gradual convergence of views is the consolidated negotiating text that is not associated with any of the protagonists but rather with a neutral party, such as the chair or the secretariat. There is a tremendous efficiency in concentrating debates on a single text rather than having multiple, mutually exclusive drafts in circulation. Such a text will reflect, within square brackets and paragraph by paragraph, the divergent positions of countries.

The negotiations for the Montreal Protocol opened chaotically with several conflicting proposals on the table. The convergence over the next two negotiating rounds of a growing number of countries on a single text provided an essential focus to the deliberations. This draft protocol never had formal status, however, until it was signed by governments on the final day in Montreal. Because it was designated as "the Executive Director's text," government representatives were not committed to any part of it at any interim stage in its development. This flexibility left open opportunities for tradeoffs and adjustments at later phases of the negotiating process.

Preemptive Actions – Taking Unilateral Leadership

Negotiation leadership may be attained by undertaking preemptive actions: imposition of controls unilaterally or by a small group of nations in advance of a broader internarional agreement. Such action (as in the case of the US 1977 ban on CFC aerosols) enhances the credibility of a country in promoting broader controls. It demonstrates willingness to take the first step. Although there may be some fear that domestic industry could suffer a competitive setback by such unilateral action, it

is equally plausible that it could prove a long-term boon by stimulating investment in new technologies.

Consideration of preemptive protective measures in advance of international negotiations may prove particularly important to the climate change issue. The industrialized countries, whose past and continuing use of fossil fuels are the prime cause of the greenhouse effect, could only gain in credibility vis-a-vis the South if they undertake serious measures to reduce their own carbon dioxide emissions before asking developing countries to at least limit emissions of greenhouse gases. Such measures would bring other advantages as well: they would buy time by delaying or reducing adverse environmental impacts of global warming, stimulate new technology, and legitimize change by undercutting the validity of arguments for delay.

Mediation as a Strategy

To serve effectively as an independent mediator, international organizations can arrange for special mediation teams to be drawn from the organization. Alternatively, these mediators could be drawn from independent rosters of experts. The team could consist of a group of specialists that would be accepted as independent, honest brokers by all negotiating parties and would be integrated into the organizational infrastructure of the negotiations from the start. It would have to be given a mandate to intervene any time it judges that such action would be constructive. If the team loses the confidence of the parties during the negotiations, a new preselected team should be installed.

An example of such a team is the panel system in the General Agreement on Tariffs and Trade (GATT). Panels consist of a few independent experts who decide whether the country being scmtinized has performed in line with GATT rules. It should be possible to use this GATT panel system as an example for mediation concerning environmental problems. Another kind of mechanism for mediation that has been used in the Organization for Economic Cooperation and Development (OECD) and in other organizations is the consultation of a group of "wise men." ***These acknowledged experts are typically wed to clarify the agenda for international consultations or negotiations. This approach is particularly useful for mediation in the prenegotiation stage.***

What Happens during Negotiations?

Bilateral Communication/Multilateral Outcomes

It has been demonstrated that bilateral diplomatic contacts are an essential prerequisite to a successful multilateral outcome. ***Discussions among governments during the intervals between formal negotiating sessions contribute significantly to understanding nationalpositions and their underlying rationale and concerns, and hence to influencing a convergence.*** Much progress is therefore "invisible": what becomes apparent at the negotiating session is often less a product of that meeting than a result of the painstaking groundwork that had occurred, on a bilateral basis, in the weeks or months preceding. ***Ifcontact is delayed until the actual negotiating session, positions may be set and therefore much harder to influence.***

Decision Support – Coping with Complexity

Issue complexity is an inherent feature of international environmental negotiation processes.

Three approaches to decision support can help to reduce this complexity:

- ***Computer models can be used to calculate the consequences for individual nations if giwn proposals are implemented.*** Such a model was used in the Law of the Sea Conference. The importance of that model was that it enabled negotiating parties to anticipate possible gains from concessions made and compare alternative concessions. Another example is the Regional Acidification INformation and Simulation (RAINS) model developed at IIASA, which ha. been used successfully by the UNECE in thk negotiations on acid rain in Europe.

  There are difficulties attached to building and using such computer models in the context of negotiations. First, participants in the negotiation are not likely to have the competence to build such models themselves; they are dependent upon researchers who, in turn, may not have the requisite practical experience in negotiations to add a necessary dimension of realism to the models. Second, the computer models may become so constrained by political considerations and compromises that they may become technically deficient. Therefore, it should be explored how independent competent national or international organizations can be commissioned to develop models that would compare gains with concessions in complex negotiations over environmental issues.

- ***Decision suppon to help negotiators deal with process properties that hinder negotiations need not be as elaborate or sophisticated as computer modeling.*** Systematic policy analyses by external advisers might also be useful. For instance, lessons learned from successes in similar earlier negotiations can be supportive, as well as illustrate the conditions for such successful outcomes.

- ***Role-playing exercises and games are another useful form of decision suppon for negotiators and policymakers.*** For example, a negotiation situation depicting pollution in the Rhine may be used in training simulations concerned with water rights and pollution in other rivers.

Creativity – Overcoming Stalemate

Increasingly fresh and creative approaches and proposals are required to deal with future environmental disputes. This is due to the pervasive complexity and uncertainty in the science of environmental issues and the global nature of these problems. Reliance on precedent established by previous environmental negotiations may not be sufficient to resolve tomorrow's problems. ***Creative ideas that somehow refocus or reframe the problem and modify the current reality of objectives are needed to identify solutions that yield positive sums covering all sides.*** This may be accomplished by broadening the size of the pie. offering side payments, trading off low priority issues that are viewed as high priority by the other side, minimizing the costs incurred by accepting the other side's interests, or satisfying the true interests of both sides.

In the preparations leading to the Mediterranean pollution talks, the Stockholm Conference Secretariat found it useful to make ***analogies*** to earlier expert analyses concerning the health effects of atomic radiation. Referring to analogies is a common approach to stimulate creative results. Too, in the ozone-depletion negotiations, the secretariat found it effective to institute an independent legal drafting group during the London meetings to act as a ***non-evaluative brainstoming group,*** outside the more formal meeting structures. Again, a creativity technique was used to push the negotiations

beyond particular stumbling blocks or potential impasses.

Problem-Solving – Seeking a Successful Formula

An important lesson from many environmental negotiations is the usefulness of separating an issue into more manageable components rather than trying to design an ideal and comprehensive treaty at one stroke. Attempting to solve all aspects of a complex problem within one framework can prove to be a formula for delay; the perfect becomes the enemy of the good. Instead, it may be desirable to work for a step-by-step consensus – incremental agreements that can be reviewed and revised as the negotiations progress.

A useful element in this process can be informal fact-finding meetings that constitute a prenegotiation phase. Such meetings can comprise bilateral contacts among governments or larger workshops that involve not only government officials but also scientists, academics, and representatives of industry and environmental organizations. Participants usually attend in their personal capacities and not as members of national delegations with established positions. One of the most highly developed examples of a prenegotiation process was the Intergovernmental Panel on Climate Change, which assembled hundreds of participants from within and outside governments for dozens of workshops over a two-year period preceding the formal opening of negotiations on a climate convention in 1991, and which has been extended in an advisory function to the negotiators.

The Precautionary Principle – Avoiding Crisis Management

There is a tendency to treat international environmental problems in a crisis posture. Unfortunately, a real or imminent catastrophe is most often the event that precipitates the need for negotiation. An obvious instance is the case of the Vienna Conventions dealing with nuclear accidents. After the Chernobyl incident, these negotiations were summoned and concluded rapidly—a prime example of the catalytic impact of crises — which is in sharp contrast to earlier, slow-moving attempts by the IAEA to motivate multilateral interest and action on the very same issues. The negotiation outcome provided a crisis management mechanism for use in future incidents.

Rarely do actors deal formally with incipient problems based upon some early warning of its future emergence. It is not often that one observes the development of a multilateral negotiation regime to deal with a dispute in the making, though such noncrisis joint problem solving might be the most rational approach. ***Both the ozone depletion and Mediterranean Sea pollution negotiations, while conducted in reaction to various levels of environmental damage, are largely preemptive negotiations, averting the problem from reaching catastrophic limits. The analysis of preconditions that facilitated these processes should be extended to other incipient environmental problems so that such noncrisis regimes can be replicated.***

Coordination – A Key to Effective Process and Implementation

International environmental negotiations proceed at many different levels, which can result in what appears to be ostensibly uncoordinated activity. The stimulation of interest group activity on environmental issues in pluralistic nations leads to extensive intra-nation negotiations during and prior to inter-nation negotiations, which tends to complicate the development of a coherent set of interests and objectives. In the case of the pollution negotiations on the Mediterranean, for each national actor, the number and diversity of interest groups and government ministries involved in the domestic debate

on national policy formulation was a function of the multiple dimensions from which the negotiations were viewed—maritime commerce, fisheries, health, environment, and tourism, to name a few. Skillful internal negotiations were required to achieve a sense of positive-sum outcome among these varied domestic groups.

When dealing with coalition behavior, as with the European Community (EC) in the ozone-depletion negotiations, another level of internal coordination is required. The strains and divergence of interests within the EC coalition prior to the Vienna Convention were many and required extensive intra-coalition bargaining before an integrated single approach could be generated.

Coordination is also required between experts and policy makers. In the Mediterranean pollution negotiations, for example, the 1972 Stockholm Conference Secretariat recognized a difference in the nature of the interchange between experts and diplomats and, as a result, encouraged the use of soft-law techniques to benefit from these differences. More frequent informal exchanges among technical experts were promoted to build the technical norms, standards, and agreements that the negotiators could then use to resolve disputes at the policy level. Thus, the mode of communication and the roles played by these two groups of actors was structured to ensure that they were complementary.

In a similar vein, in the case of biological conservation negotiations, the design of treaty implementation structures took into account the difficulties in communication that sometimes plagues scientific and diplomatic players in negotiation. ***Implementation clearly is best left to independent scientists, rather than diplomats or administrators, who can regularly assess needed improvements in the operation of a regime based on the evolution of scientific and technical knowledge in the field.***

At the same time, some negotiation cases have exhibited effective coordination between the technical experts and diplomats. Again in the Mediterranean pollution case, ***a multidisciplinary group of experts*** assembled from various interested UN organizations established a common definition of the problem and a common language that facilitated discussions at the policy level. The IAEA draft conventions on nuclear safety developed by technical experts served a similar purpose of enhancing communication among the policymakers once the negotiation got under way.

A third potential source of uncoordinated activity stems from the fact that while environmental issues, by their very nature, may have to be negotiated at the international level, they are implemented and regulated at much lower levels. For implementation to be a faithful representation of the intent of negotiated agreements, existing local regulations must be adaptable and local authorities induced to be compliant. Again, to cause these local actors to behave as intended may require extensive domestic negotiations. For example, in the case of acid-rain regulations in the United States and Canada, the standards imposed by Clean Air Acts or any future negotiated agreement must be implemented by the states and provinces, respectively, who will not be direct participants in the negotiations themselves. In biological conservation negotiations, local and regional authorities, of necessity, play a significant role in the implementation of land-use and natural reserve plans that are agreed to in negotiation. ***Coordination problems can often be solved through restructuring the formal institutions or informal processes of negotiation.***

What **are the Results?**

Adaptable Formulas

Looking back, the Montreal Protocol may be a paradigm for a new negotiating approach mandated by threats to the global environment. The treaty contained explicit procedures to facilitate its adaptation to evolving conditions. And any such revisions would be based upon regularly scheduled periodic reassessments of the changing science, of environmental impacts, of economic factors, and of technological advances -- a process that came to involve the mobilization of hundreds of international experts in a path-breaking and innovative exercise.

Most negotiations of the past have been undertaken in order to set an international decision in concrete. In contrast, ***the Montreal Protocol points the way toward a new concept, in which the negotiators deliberately avoided a static solution, and designed a dynamic and flexible instrument capable of responding to changing circumstances.*** Thus, the experience of the ozone treaty may offer hope that it is possible for sovereign nations to agree on cooperative and costly actions even in the face of scientific uncertainty and remote threats—utilizing the skills of negotiation in the longer-term perspective of stewardship of the planet.

Waiting for Global Participation?

Mitigating a global danger such as ozone layer depletion or climate change requires virtually universal participation to be truly effective. However, ***at some point negotiators must determine whether to go ahead with a less than optimal number of signatories or to delay the process to obtain wider agreement.*** They must assess the benefits -- substantive and psychological – of a formal agreement involving fewer nations against the potential of nonparties undermining the treaty's impact as free riders or pollution havens.

Going Beyond "Best Available Technology"

Negotiators of environmental treaties involving controls—for example, dealing with hazardous materials, sulfur dioxide, or CFC emissions, pollution of the Rhine or of regional seas—must decide whether to link such controls with the best available technology (BAT) or whether to mandate technology-forcing targets. BAT clauses in effect ratify the status quo; the Montreal Protocol negotiators decided this was an insufficient response to the threat to the ozone layer, and established target dates for a phasedown of CFCs ***before*** alternatives were developed.

This philosophy was evident in Germany where the Environment Minister Klaus Toepfer had maintained that he was convinced that if given a clear-cut timetable, industry would be stimulated to come up with substitutes, whereas if industry were given more time, it would take more time. The international chemical industry long claimed that it would be impossible to find practicable substitutes for CFCs. Only in 1986, when the prospects of internationally agreed controls became serious, did they resume, after a several-year hiatus, serious research into substitutes. And within the first year after the Montreal Protocol was signed, the initial research results made a total phaseout of these chemicals a practicable goal.

How effective are international organizations as instruments of regime formation with regard to environmental issues? The evidence suggests that the record in this area is mixed. For the most part UNEP has been a success story, and much the same can be said of the role of the ECE with regard to transboundary air pollution and of the IMO in the case of the regime established under the terms of the 1973–1978 Convention for the Prevention of Pollution from Ships (MARPOL). The same is true of the International Union for the Conservation of Nature and Natural Resources (IUCN) — a hybrid between a nongovenunental organization and an intergovernmental organization — in connection with biological conservation regimes like the arrangements for trade in endangered species set up under the 1973 Washington Convention on International Trade in Endangered Species (CITES).

In other cases, international organizations have been less successful. The OECD encountered significant limits in dealing both with nuclear security and with transboundary movements of hazardous wastes. In the immediate aftermath of the Chernobyl accident, the IAEA may well have set its sights too low in pushing for the adoption of the 1986 Vienna Conventions on notification and assistance in the event of a nuclear accident. The FAO has participated in establishing several international regimes dealing with fisheries, but, once in place, the regimes themselves have not proved particularly effective. Somewhat similar observations are applicable regarding the role of UNCTAD in establishing commodity regimes to regulate international trade in primary products, such as tin, coffee, sugar, and wheat. Beyond this, there are hints that international organizations can become overactive participants in environmental negotiations. In some cases, they have exacerbated the collective action problems associated with such negotiations, rather than helped to solve them, or have pushed for arrangements that seem attractive on paper but that are unlikely to prove workable. While the evidence is far from clear-cut, such problems may have occurred in the negotiationof some of the biological conservation regimes.

What accounts for variations in the effectiveness of international organizations as players in environmental negotiations? The answer to this question undoubtedly relies on a combination of exogenous and endogenous factors. In the case of ozone depletion, for example, UNEP benefitted from strong public interest, the development of a relatively high degree of consensus among scientists on the issue, and the emergence of the necessary political will among the participating states. ***What is needed, in effect, is a convergence of exogenous and endogenous factors that maximize the effectiveness of international organizations in environmental negotiations.***

Will convergences of this type occur regularly in the future and, in particular, can we expect them to occur in conjunction with the emerging issues of global environmental change, such as climate change and biodiversity? There is no basis to assume that such convergences will occur. As the 1989 United Nations debate on UNCED suggests, these issues may become too important and too politicized to be handled by an organization like UNEP, no matter how technically competent it seems. The issues themselves, such as the responsibility of states for environmental destruction occurring within their jurisdictions or the obligations of developed countries to assist developing countries in dealing with their environmental problems, may raise questions that can only be resolved at the highest political levels. Yet it would be inappropriate to form bleak conclusions about the probable roles of international organizations as instruments of environmental regime formation.

Conclusion

A major goal of the study is to support the many ongoing regional and global processes of international negotiation concerning environmental problems. As a result, an important objective is

to draw lessons from earlier processes of negotiation on the environment that may be useful for practitioners engaged in present or Future bargaining on these issues. We hope that this Executive Report has presented insights that can help participants in the negotiation process in a very practical sense.

Our results suggest some important issues that need to be addressed further by practitioners and researchers alike:

- Many new groups and individuals--beyond traditional governmental officials--are becoming important participants in the formal negotiation process. Scientists, nongovernmental organizations, and regional and intergovernmental organizations are among the most active. Their roles and relationships to governmental delegations still require better definition.

- The scientific community has identified many linkages between various environmental issues that should be addressed simultaneously. Moreover, policy makers have linked environmental issues with other important policy concerns, such as development and trade. These linkages are often very complex. Ways must be found to develop a common understanding of these linkages among interested parties for negotiations to proceed and meaningful tradeoffs to be made.

- Bridging the differences between the industrialized and developing countries on environmental issues will be a continuing problem given their different interpretations of fair and equitable solutions. Is a common definition of fairness and equity possible?

- New approaches to innovative problem solving--ways of searching for acceptable formulas--need to be found and implemented to develop the novel solutions that are required to overcome impasses.

- New strategies to implement negotiated environmental agreements need to be identified that reduce national ratification delays and increase the probabilities of compliance.

The 1992 United Nations Conference on Environment and Development (UNCED) is a major milestone in the process of negotiating global and regional environmentdevelopment issues. It must be viewed as just that, a ***milestone*** in a much longer process. Hopefully, the insights reflected in this study will be useful in supporting the development of meaningful agreements at UNCED. More importantly, though, it is our hope that these conclusions will be applicable as well to subsequent international environmental negotiation encounters to facilitate the development of efficient processes and effective solutions.