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**From Stockholm to Rio
1972-1992**

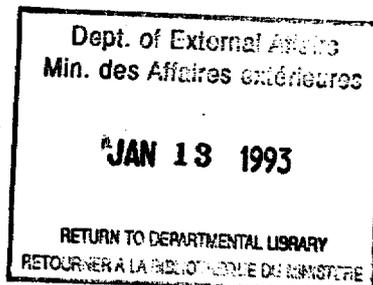
**Summary Report of the Seminar
Convened by the Canadian
Department of External Affairs and International Trade
and the
Department of Environment**

*Willson House, Meech Lake, Québec
8-9 December 1991*

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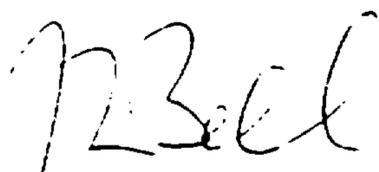
Foreword

The United Nations Conference on Environment and Development - UNCED - poses an unprecedented challenge to the world's governments in an extraordinary era in human history. It is to integrate environmental considerations with economic decision-making, to recognize the inextricable link between environmental degradation and poverty, and to forge a new framework for relations between industrialized and developing states.

How do we meet the challenge of sustainable development as embodied in UNCED's agenda? This question brought together a group of individuals who have played pivotal roles in advancing global action on the environment, including Mr. Maurice Strong who was Secretary-General of the Stockholm Conference, and is Secretary General of UNCED. For almost two days they and Canadian officials reviewed the legacy of the landmark 1972 United Nations Conference on the Human Environment - the Stockholm Conference - and the prospects for UNCED given today's social, political and economic reality in Canada and the world.

This report on the seminar reflects to some degree UNCED's complexity in the range of views expressed by the participants. At the concluding event, a lunch hosted by the Secretary of State for External Affairs, the Honourable Barbara McDougall, Mr. Strong presented the key points made during the seminar, as well as his vision of UNCED's potential, as its Secretary General. The discussion which followed engaged Mme. McDougall and her cabinet colleagues, the Honourable Jean Charest, Minister for the Environment, and the Honourable Pauline Browes, Minister of State for the Environment, in an exploration of the role that Canada can play to achieve its national and international objectives in the UNCED process and beyond.

UNCED is clearly an important milestone for the world, and its legacy will guide us into the next century. It is our hope that the results of this seminar will make some small contribution in illuminating the "road to Rio".



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SUMMARY OF MAIN POINTS

The "Stockholm to Rio" Seminar was intended to be an opportunity for sharing the views and experiences of many of the principal Canadian delegates and others involved in the 1972 UN Conference on the Human Environment (The Stockholm Conference), with the key Canadian officials responsible for Canadian preparations for the 1992 UN Conference on Environment and Development (UNCED).

Given the short time available for discussions, no overall conclusions or recommendations were intended or made. Instead, this summary highlights in point form the views and proposals made by different invited speakers during the discussions. Although there was wide agreement on some issues, the following should not be regarded as representing consensus views. None of these points should be attributed to specific participants, nor should their publication by the Canadian government be read as official endorsement of the views expressed. Rather, this summary is being distributed as a record of the seminar, in order to provoke further reflection and debate among Canadians, both inside government and outside of it, who are involved in the UNCED process.

To avoid duplication, this summary does not include the many relevant points made in the two main background papers which follow this summary. However, to assist the reader the footnotes include cross references to the relevant sections and points in the two main background papers.

The broad categories for summarizing the main points are in chronological order. Many of the points made were presented on a comparative basis, linking the 1972 Stockholm Conference and UNCED, and they are presented that way below. As the issues of the implementation of the 1972 Stockholm Action Plan and the main successes and failures of international action on the environment in the period 1972-1992 were extensively assessed in the two main background papers, the discussions during the Seminar focused more on the differences between the Stockholm and Rio Conferences, the lessons learned and on the elements and prospects for success at and after UNCED.

(i) Canadian Preparations for Stockholm and Rio¹

- In 1968 Canada was an early supporter and co-sponsor of the Swedish resolution on convening a UN Conference on the Human Environment and took an active role in the UN Preparatory Committee during 1970-72. In 1981 Canada took the lead in proposing the creation of the World Commission on Environment and Development which constituted the first crucial step towards the 1992 UN Conference on Environment and Development. Canada was also one of the original co-sponsors of the resolution in 1988 calling for the establishment of UNCED.

¹See Bruce, pp. 3-4 and 9-11

- In 1972 there was a far greater coincidence between Canadian national interests and international environmental concerns (e.g. on marine pollution and fisheries, on Arctic jurisdiction, on the use and management of global commons). In 1992 there is a much larger gap between our domestic policies and our international posture on several crucial sustainable development issues (e.g. energy, agriculture, forestry and indigenous peoples); and action on the UNCED agenda will require much greater changes in our domestic policies in those sectors.
- In 1972 Canada had a relatively unblemished record on international environmental concerns. Today Canada is undergoing international scrutiny and criticism concerning its high consumption of fossil fuels, clear cutting of old growth forest, agricultural subsidies and the political and economic rights of indigenous peoples. These questions received only incidental discussion at the Stockholm Conference but are now major worldwide concerns.
- In 1972, the Canadian economy was relatively healthy and national unity was not seen to be in crisis. In 1992, these are the two major issues on the domestic agenda.
- In preparing for the 1972 Stockholm Conference there was a great deal of inter-departmental and federal-provincial cooperation, with few major differences or conflicts between them. In 1992 there exists a range of differences between the federal and provincial governments and within and among the key economic and sectoral agencies on domestic policy issues (e.g. forestry, agriculture) and several global issues (e.g. greenhouse gas emissions, international trade).
- The Canadian energy, agriculture, forestry and other industries are also taking widely divergent positions today and deploying new, vigorous and politically influential lobbying groups to ensure that their views are known and incorporated into Canadian positions. At the same time, opposing NGOs are much more professional as well.
- In 1972 none of the central economic or key sectoral agencies felt particularly concerned or threatened by the newly emerging environment agenda. Today most of the central economic and key sectoral agencies are concerned about the new sustainable development agenda but none have yet embraced it. Sustainable development has not been incorporated into Canadian budgetary policy.
- Canada's approach to Stockholm was driven in large measure by our concerns over sovereignty in the Arctic and against tanker pollution on our shores. Much of this effort was directed towards finding multilateral solutions for bilateral problems with the USA. One of the principal achievements of Stockholm was to demonstrate that

middle powers, like Canada, could not leave questions of conservation of the planet to the rule of the strongest.

- Canada does have domestic imperatives in UNCED. We could and should use the conference, for example, to drive home the point about our concerns over the long term survival of fishing stocks on the high seas. We could use UNCED, but have not so far, to pursue our interests as well in terms of securing our freshwater supplies against demands from our neighbours. However, what we lack, so far, is a vision for Canada of the kind of environment we want in the long run, and how UNCED will help us attain it.
- In the preparations for Stockholm, the Canadian delegation repeatedly received very clear political direction from Ministers, and from Cabinet to guide their negotiations. For Canada's delegation to UNCED, such political direction has been a long time in coming, and where Canadian Ministers stand politically on many of the issues is not yet known.

(ii) The International Context for Stockholm and Rio²

- In 1972 there was limited international scientific cooperation on environmental problems and little data on global environmental conditions and trends. Today there is much more of both and there are developed professional constituencies around most of the issues on the UNCED agenda.
- In 1972 there was little knowledge of the economic costs of either taking or postponing action on environmental degradation and pollution. Today those costs are largely known, are considered far greater than anyone anticipated twenty years earlier and, in some countries, are now a major political concern and obstacle to progress.
- The Stockholm Conference was held at the end of a long period of international prosperity. Today, UNCED is occurring in the second year of a prolonged global recession, and it comes after a decade long debt crisis for many developing countries. Today, in the face of growing unemployment and recessions in their national and the global economies, the rich countries have never felt so poor. With declining budgets, public support for increased international programs and especially for development aid has fallen dramatically.

² See Bruce, pp. 5-8 and 15-16 plus Munro, pp. 2-5.

- 1972 was a US Presidential election year but the incumbent administration and likely election winner had taken a constructive leadership role on environmental problems both nationally and internationally. 1992 is again a US Presidential election year but the incumbent administration and also likely election winner has increasingly blocked progress on many international environmental issues in and outside the UNCED preparatory negotiations. After being in the vanguard in 1972, the USA remains in 1992 a major force but from an increasingly isolated position in the rearguard.
- In 1972 Japan was a reluctant participant in Stockholm. Today, it is a major player in UNCED, with the opportunity to play a principal role in shaping its financial outcomes.
- In 1972 there were few environmental pollution problems which were considered urgent by most developing countries. In 1992 the developing countries environmental concerns are much less abstract. Most are faced with urgent domestic problems of both natural resource depletion and environmental degradation.
- To a surprising degree, the developing countries positions in 1972 and 1992 are very similar. Developing countries then and now are concerned about Northern imposed constraints on their development, and about the need for additional resources. India, and Mrs Gandhi in particular, played a role analogous to the one played by Malaysia and Prime Minister Mahathir today.
- One Southern country that has sharply shifted its stance is Brazil. In 1972 its delegates argued that "environment is a conspiracy of the rich to keep us in a state of happy savagery", and declared their interest in receiving more polluting investment from the North. Today, Brazil is the host of the conference, and consistently registers its concerns about both halves of the environment and development agenda.
- In 1972 the developing countries persisted and succeeded in making the linkage between environment and international trade one of the key preoccupations at the Stockholm Conference. In 1992 developed countries have persisted and so far succeeded in minimizing its prominence on the agenda for the Rio Conference.
- The Founex meeting in June 1971, involving top economists and other experts from developed and developing countries, had a major impact in expanding the international environment agenda beyond concerns about conservation and pollution to wider issues including flows of development assistance, trade and development. The Founex report helped reassure many developing countries that the Stockholm Conference would not lead to additional constraints on their development prospects.

It also helped secure their active participation in the negotiations before and at the Stockholm Conference.

- In 1972 the eastern European countries and the USSR boycotted the Stockholm Conference because the German Democratic Republic was not permitted to participate as a full member. In 1992 all eastern European countries and the new states of the CIS will likely participate in the Rio Conference. Many of them will now be competing with developing countries in seeking advice and assistance in dealing with their enormous and related problems of economic decline and severe environmental degradation. Meanwhile, the developing countries have not fully woken up to the adverse consequences for their interests of the decline of the Cold War.
- The Stockholm Conference Preparatory Committee had 27 members. Today, all UN countries are members of the UNCED Preparatory Committee, and the numbers of UN member states are growing. At the same time, the agenda for the Conference is much more detailed and complex than it was for Stockholm.
- Only two Heads of State or Government attended the Stockholm Conference, the Swedish Prime Minister, Olaf Palme and India's Prime Minister, Indira Gandhi. Prime Minister Gandhi's commitment helped secure the participation and support of many other developing countries. At the 1992 Rio Conference all Heads of State or Government are invited to participate in their own special Earth Summit.
- At the 1972 Stockholm Conference the NGOs held the first global parallel conference on the environment. They also published, for the first time at a major international conference, a daily newspaper called "ECHO" which provided a wide range of independent views and assessments on progress made and needed on key issues being discussed in the official UN conference. Only a few of the NGOs were from developing countries. Overall, the NGOs had a significant impact on a few flagship issues (e.g. the 10 year moratorium on commercial whaling) but on little else, although their immediate psychological impact on both governments and the media was considerable.
- Today NGOs have better international links and there are more from developing countries, with over 150 third world NGOs already attending UNCED intergovernmental as well as their own preparatory meetings. They have also established better credentials both with the media and the broader public. As a result, NGOs will likely have a much greater impact on many more issues at the 1992 Rio Conference.

- In 1972 world industry either ignored the Stockholm Conference or watched sceptically from the sidelines. Today, industry is a major and well organized contributor to national and international negotiations, especially in OECD countries where some industries and large corporations are ahead of their own governments.
- At and after the 1972 Stockholm Conference a chief obstacle to better UN coordination and cooperation on environment was the relative independence of the main UN agencies and the corresponding lack of coordination and cooperation among the counterpart sectoral departments at the national level. Today, the constructive participation of the UN organizations and agencies in the process of preparations for UNCED has worked extremely well and offers a promising new model for such cooperation in the post-Rio period.
- The initiative to convene the Stockholm Conference in 1972 was driven initially by concerns about pollution. The topics of "Environment and Development" was only one of the six main agenda items, and the nexus between the two emerged from the debate. For Rio "Environment and Development" is the overall theme of the Conference. At the same time, the perception of environment and development as competing interests has not been resolved. The 1970's view that environment is the enemy of development and vice versa still prevails.
- UNCED's prospects for success are significantly lower in the face of these two views of development: the first is a view of development based on unlimited potential for resource exploitation and unimpeded substitutability among capital, labour and resources, in which environmental protection is a cost; the second is a view of development as economic and social change adapted to natural processes, with environmental protection as a benefit and capital, labour and resources managed in concert but not interchangeable. The outlines of this latter view emerged in 1972 but were not articulated effectively until the Brundtland Commission.
- Unfortunately, UNGA Resolution 44/228 that established UNCED was framed by delegates who had not, for the most part, read or understood the Brundtland Commission's report. As a result, we have been lumbered with two agendas - one Northern and one Southern. In spite of the failure of the UN General Assembly to mould Rio around a fully integrated sustainable development agenda as recommended by the Brundtland Commission, the UNCED Secretariat is gradually incorporating major but neglected issues such as population and international trade into the Rio agenda.

- At the time of the 1972 Stockholm Conference there was a general belief that once governments agreed to tackle environmental problems, they would make a difference to the future. Today, few share that belief. The problems have proven to be far more complex, intractable and widespread. It is now recognized that intergovernmental agreements must be backed up with firm political commitments to domestic policy reform and financial commitments to increase the capacity of all major actors - including industry and NGOs - to work towards sustainable development, especially within and among developing countries.

(iii) **Achievements of the Stockholm Conference³**

(This issue was discussed in greater detail in the papers prepared for the seminar, in the pages footnoted below).

- In 1972, getting agreement on many issues on the Stockholm Conference agenda was comparatively easier because implementation appeared to require relatively marginal adjustments in national policies and economies. In 1992 the costs of taking or postponing action are far greater, and effective action will require fundamental changes in many policies, laws and institutions both nationally and internationally, as well as changes in public behaviour and expectations.
- Unfortunately, the interplay between national and international institutions has not been as effective in the environmental area as had been hoped. While most countries after Stockholm created environmental agencies, there has been no real change in the way that governments operate, while international institutions in this area remain fairly weak.
- UNEP has performed surprisingly well, in view of the fundamental constraints that it faces.
- Principle 21 of the 1972 Stockholm Declaration represented a watershed in international environmental law in acknowledging the sovereign right of states to exploit their own resources and the responsibility of states "to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction". Canada played a central role in the drafting of Principle 21. The conceptual framework provided by Principle 21 has been applied successfully by Canada in other negotiations, and is the legal

³ See Bruce, pp. 12-14 and 18-25 plus Munro, pp. 4-5.

foundation of virtually every international environmental agreement and legal instrument concluded since Stockholm.

- In 1972 agreement was reached on a follow-up program with a budget of US \$100 million for the initial five years - which would be equivalent to around US \$400 million in current dollars. In 1992, an effective outcome to UNCED will require funding several times this figure - in the billions rather than hundreds of millions of dollars.
- (iv) **From Rio to Stockholm: Lessons for 1992⁴**
- *Set specific goals and targets for Agenda 21.* Many recommendations in the Stockholm Action Plan failed to have a significant impact during the first decade because they were too general or vague, especially those directed to the UN specialized agencies. The same mistake should not be repeated at UNCED. The UNCED Secretary General's insistence on specific goals, targets and commitments for Agenda 21 should be vigorously supported.
 - *Curtail lobbying by UN agencies.* At the Stockholm Conference the UN agencies conducted an intense albeit clandestine campaign against the proposal to establish the United Nations Environment Programme (UNEP). Their lobbying backfired. Before and at Rio, governments should make it clear they will not tolerate similar interference by international public servants. Attempts to do so should be exposed and stopped.
 - *Strengthen UN coordination and cooperation.* Since Stockholm the UN agencies have largely ignored or resisted UNEP coordination efforts. Throughout the UN system today, too much of the limited staff and financial resources are squandered on inter-agency rivalries and ineffective coordination machinery. UNCED should ensure that existing or new follow-up machinery has the political and financial clout to secure the coordination and full cooperation of other UN bodies. The Rio Conference should also start the process for making the specialized agencies subordinate and fully accountable to the UN General Assembly.
 - *Expand environmental monitoring and assessment capabilities.* Ten years after Stockholm, the assessment of environmental conditions and trends continue to be constrained by major gaps and a still modest capability for monitoring, collecting and

⁴ See Bruce, pp.39-41 and Munro, pp. 19-28.

combining international environmental data. The situation improved at the global level during the 1980s, especially through the pioneering Earthwatch programs of UNEP. Yet today in most developing countries and regions there is still little or no technical capacity for monitoring environmental conditions and trends. A recent study on the effectiveness of international environmental conventions revealed that many developing countries lack the ability to collect and assess the data needed to meet their treaty reporting obligations. Capacity building in developing countries on this and in many other areas of environmental management must be supported as a priority.

- ***Establish independent scientific panels.*** On key international environmental issues during the 1980s (e.g. acid rain, climate warming), scientists from different countries were often set against each other and scientific uncertainty contributed to postpone further action. Building on the example of the Intergovernmental Panel on Climate Change (IPCC), UNCED should put global scientific cooperation at the centre of the Agenda 21 program and budget. Follow-up mechanisms should include greater use of independent international scientific panels and commissions of inquiry for establishing an authoritative basis for decision-making and dispute settlement.
- ***Breach the barricades between regional groups.*** At many international conferences since the Stockholm Conference, regional caucuses increasingly displaced the scheduled multilateral discussions, leaving little room or time for inter-regional negotiations. At the eleventh hour the situation was often only salvaged by dodging the issues with compromises on language in order to get a face-saving but artificial consensus. As we move away from the era of zero-sum games to confront new global threats to national and common interests, the political habits and barriers dividing countries and regions must be breached. Before and at the Rio Conference, Canada should join or form groups of likeminded countries which transcend the boundaries of the conventional regional groups. These new "coalitions for Agenda 21" should lead the way towards a higher common denominator rather than, as too often happens now, the lowest common denominator.
- ***Aim for consensus but not at any price.*** At the fourth session of the Preparatory Committee and at the Rio Conference itself, when there is near consensus but little or no chance of complete consensus because of objections by one or a few countries, that reality should be respected and recorded by voting on the issue.
- ***Ensure secure funding for implementing Agenda 21.*** The 1972 Stockholm Action Plan and UNEP relied almost entirely on voluntary contributions. Being voluntary, the annual contributions were unpredictable and unreliable as a basis for effective planning and management of international environmental programs requiring

sustained, longer term efforts. The full financial implications of Agenda 21 should be clearly spelled out and be largely funded through assessed and inflation indexed annual contributions.

- ***Adopt new and automatic sources of funds.*** As a global program for sustainable development and survival, Agenda 21 must be insulated from domestic political fluctuations in key countries. Some of the proposals for new sources of revenue and automatic funding set out in the 1987 Brundtland report and later studies should be negotiated and adopted to provide additional financing for implementing Agenda 21 (e.g. user charges for global commons, revenue from the exploitation of international common property resources, the peace dividend from cutbacks in military expenditures).
- ***Protect all countries from environmental threats or damage by other countries.*** National sovereignty concerns undercut progress on several key issues in the Stockholm Declaration and Action Plan. Over the last two decades they continued to block progress in many areas, especially international law. Although an impressive number of new environmental conventions have been negotiated since 1972, countries can largely ignore them with impunity. With no built-in or binding legal remedies, affected states can only apply whatever individual diplomatic, economic or military clout they may have. Success in implementing Agenda 21 will require new legal measures and mechanisms for securing compliance with international environmental laws and resolving conflicts which will inevitably arise.⁵
- ***Secure a new deal for the poor.*** National sovereignty concerns are generally invoked by countries with too much or too little political and economic power. The latter are the majority and have more reason for concern. With little of anything except increasing poverty, trade deficits and debts, most developing countries vigorously defend what little power they have. The Rio Conference must confront the causes of their concern. As stated in the recent UNCED report by the ten SADCC countries, the "Earth Charter and Agenda 21 must expand the development choices and opportunities for the majority of poor people, communities and countries...no new political and economic arrangements within or among our countries can be called sustainable if they fail to change the present situation of a rich minority and poor majority by significantly reducing the gap between them. The Earth Charter and

⁵ Choosing our Common Future, pp. 25-26.

Agenda 21 must provide a basis for a new deal for the majority of poor people and countries in order to secure and sustain our common future."⁶

- ***Set a threshold for the universal application of environmental conventions.*** Put in place a universality formula for critical global conventions which, once ratified by a representative majority of countries, would become automatically applicable for all countries. As a minimum, use the formula in Article 108 of the UN Charter.
 - ***Conduct independent assessments of progress made and needed.*** The 1972 Stockholm Action Plan lacked any independent mechanisms for periodically assessing and reporting on progress made and needed. The post-Rio institutional arrangements should include an independent capacity and mechanisms for monitoring, assessing and reporting regularly on achievements made and changes needed in implementing Agenda 21 effectively. For example, more extensive use should be made of independent fact-finding bodies, mini-commissions and task forces with specific mandates and reporting deadlines. They should use similar open decision-making processes, public hearings and periodic public reporting as pioneered by the Brundtland Commission.
 - ***Give youth and NGOs a greater role in decision-making.*** The views and interests of the next and later generations have not been directly represented in decision-making at or since the Stockholm Conference. But the 1990 Bergen Conference blazed a new trail. For the first time at any UN sponsored meeting, the representatives of youth plus four other NGO groups participated on an equal footing with governments in the preparatory work and decision-making. It is now time to move beyond the largely adversarial roles of the last twenty years to more constructive and productive partnerships between governments and NGOs. New ways must be found for NGOs, and especially youth, to participate more directly in national and international decision-making.
- (v) **Elements and Prospects for Success at and after the 1992 Rio Conference**
- To maintain Canada's leadership role and credibility before and at the 1992 Rio Conference, Canada must reduce the gap between its international posture and its domestic policies and performance in key areas (e.g. energy, forestry, agriculture,

⁶ Sustaining our Common Future, Special Report for the UNCED Secretariat by the Southern African Development Coordination Conference, October 1991, p. 32.

- indigenous peoples). Canada has committed itself to the stabilization of CO₂ emissions but has not yet set out the practical measures it will take to achieve this.
- Canada must also support the internationalization of the Polluter Pays Principle into areas such as climate change, building on the position it has already taken in the early 1980s in the OECD.
 - Canada needs to once again articulate its distinctive role as a middle power in multilateral environmental fora and find a domestic rationale for staking out this position. Of late, Canada has placed too much weight on its membership in the G-7; rather than its role in the United Nations. Canadians should not be lulled by the notion that we are witnessing a resurgence of the authority of the United Nations. What we have seen is a re-assertion of the authority of the Security Council, through the coordination among the Permanent Five.
 - Canada, as a contribution to the Rio Conference follow-up and implementation of Agenda 21, should seriously consider the advantages of converting the IDRC from a Canadian to an international institution for major new programs of knowledge transfer and capacity building in support of sustainable development.
 - The Canadian development of national and regional roundtables on sustainable development is a major innovation and asset in involving key sectors of society in shaping new policies and strategies, in raising public awareness and understanding and in preparing for the 1992 Rio Conference.
 - Canada's home grown expertise in information systems could make a major practical contribution to the monitoring and implementation of the decisions made at UNCED. The Canadian government is remarkable in having a coherent view of geographic data, cross-referenced with economic and statistical information.
 - The 1992 Earth Charter should build on the 1972 Stockholm Declaration but must now go far beyond it. Given the political importance of the Earth Charter and the many other difficult issues on the agenda for Working Group III at the fourth session of the UNCED Preparatory Committee, it should now be shifted to a special group to negotiate and finalize the draft text for presentation to the Rio Conference.
 - As a major priority, international environmental laws, procedures and legal institutions must be strengthened to secure compliance and to avoid or resolve environmental conflicts. New approaches to settling environmental disputes will be required.

- New institutional arrangements will be needed nationally and internationally in order to implement Agenda 21 effectively. If governments are unable to decide at the Rio Conference because of the ongoing negotiations on the overall restructuring of the UN, then possibly the UNCED process and staff should be continued on a temporary basis until agreement is reached on the new arrangements.
- Building on the Earth Summit, consideration should be given to convening annual summits on environment and development using, for example, a representative formula such as combining or expanding the G7 plus G15 members.
- A special session of the UN General Assembly should be convened in 1995 to assess progress made and needed in implementing the Agenda 21 programs.
- A new and independent "Earth Council" is needed. In close cooperation with IUCN, ICSU and other world class associations of scientists and economists, an Earth Council would undertake and issue authoritative and public assessments on progress made and needed in implementing Agenda 21 both nationally and globally.
- The decision-making systems which we put in place after UNCED had to be future oriented and will have to take into account the increasing environmental instability of the planet, and its capacity for negative surprises. Developing countries are looking for a hedge against future disasters.
- The 1992 Rio Conference and Earth Summit must be a practical and political success. The greatest danger to future progress will be a general failure masquerading as a success or even a partial failure in some key areas disguised and presented to the world as a success.
- We must avoid setting the parameters of success for UNCED too low, so that success is guaranteed. If politicians think they will have a hard time in persuading people to make a small contribution to sustainable development, perhaps politicians should challenge the public to make a big one. The public is far ahead of its leaders in its willingness to change to meet the future.
- Success at and after the 1992 Rio Conference will depend on building new partnerships which transcend north-south and regional distinctions and link governments, industry, labour, the scientific community, youth and other NGOs in new decision-making processes and "coalitions for Agenda 21".

- The criteria for success is clearly different for leaders from the North and the South. In a recent report by a group of experts from developing countries, the following two strategic considerations were set for guiding the South's negotiating position for the 1992 Rio Conference:
 - "Ensuring that the South has adequate 'environmental space' for its future development."
 - "Restructuring global economic relations in such a way that the South obtains the required resources, technology and access to markets enabling it to pursue a development process that is not only environmentally sound but also rapid enough to meet the needs and aspirations of its growing population."⁷

If significant progress is not achieved on either of these two concerns then the Rio Conference will not succeed. If OECD governments are not prepared to make significantly new and large financial commitments for implementing Agenda 21, the Rio Conference and follow-up will fail.

- The reference point for assessing the success or failure of the 1992 Rio Conference must be the future and not the past. Modest progress through incremental steps forward must not be judged as a success if they still fall far short of the action needed to address effectively the many national and global threats to our environment, health and economies. The Rio Conference cannot succeed if nations, including Canada, are not prepared to bite the bullet of reform of those domestic policies now driving unsustainable patterns of development and trade. Fundamental changes are needed.

⁷ Environment and Development: Towards a Common Strategy for the South in the UNCED Negotiations and Beyond, The South Centre, November 1991.

**A Review of the Stockholm Conference of 1972,
Of Some Significant Developments in the Environment
Since 1972, and of Some Major Challenges and
Opportunities for Canada in Preparing for UNCED in 1992**

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December, 1991

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(i)

Foreword

In this paper I have attempted to respond to the requests which were made to me:

- a) to review "the main challenges that faced Canada in preparing for Stockholm"
- b) to evaluate "the results of the Conference"
- c) to evaluate "the international environmental agenda as it appeared in 1972 and as it now appears in the lead-up to the 1992 UNCED in Rio."

It would be impossible to cover in any detail all the significant developments in each of these fields in the time and space available to me. I hope, however, that I have been able to provide a sufficiently focused review to respond to the requests made of me and that it will provide reliable and helpful guidance for those preparing for Brazil '92.

It was suggested that I should add some ideas and suggestions at the end which might serve to generate a discussion of some of the underlying themes and challenges in UNCED's agenda as we move toward 2000. I have done so. Some thoughts have been inspired by my talks with many colleagues. Some emerged as I reflected on the nearly 25 years during which "the environment" emerged as a major national and international issue. And some suggestions may seem unrealistic and impractical. The Seminar will separate the good from the bad.

In the time available to me I have carried out a review of the files of the Department of External Affairs covering the Stockholm Conference. I have had useful discussions with the Honourable Charles Caccia, P.C., M.P., Messrs. MacNeill and Runnals (IRPP), Mr. Beesley (EA), Dr. Munro, Dr. Brooks (IDRC), Messrs. Jim Bruce, Gary Vernon (ICOD), Green (CIDA) and Angell (EA) together with Mr. de Hoog, Mr. Small and several of their colleagues. I am grateful to them for their time and their help. This paper is a product of these many consultations, of my file search and my recollections of Stockholm, 19 years after. Any errors of commission or omission are entirely mine.

There is some repetition in moving from section to section. It was difficult to avoid since most of themes of the Stockholm Conference continued through the 1970's and 1980's into the 1990's.

Executive Summary

The opening sections of this Review present a survey of the major developments leading up to, during and, after the Conference on the Human Environment in Stockholm in 1972. It observes that the idea of a conference covering as many complex national and international issues under the catch-all word "environment" was met with considerable scepticism and some active opposition. In spite of the cool climate and the inevitable difficulties of designing a world conference in such a new field, the Secretary General and a small number of committed governments, including the Canadian, were able to produce a credible agenda and work program, and to mobilize support sufficient to carry it through with remarkable success. It is still regarded as one of, if not the most important in U.N. history.

2. In addition to approving the Declaration on the Human Environment and 109 recommendations for international action which are summarized in the Review, the Conference forced governments and the private sector to focus their attention on the real and serious risks that nations were confronting because of the heavy demands that were being made on the earth's resources by the accelerating increase in world economic growth.

3. Third World countries were doubtful, initially, about the impact of these risks, and they distrusted the motives and questioned the measures proposed mainly by the Western countries (and the Western oriented Secretariat). They suspected it was part of a plan which, advertently or inadvertently, would inhibit their economy and social growth. In the subsequent two decades developing countries, while continuing to place heavy responsibility on the industrialized world for environmental damage and the wasteful use of resources, came to realize that they and the world are indeed facing serious and perhaps irreversible environmental degradation.

4. In addition to the concrete decisions taken at the Stockholm Conference and the subsequent implementation of some of them, the Conference served to put "the environment" on the agenda of nations in the 1970's and 1980's. In these decades existing environmental damage became more serious, visible, and costly, and new threats were added to the agenda. In order to re-focus the world's attention and to re-vitalize support for existing and new environment programs, the UNGA established the World Commission on Environment and Development - the Brundtland Commission. It produced the most comprehensive and imaginative report that we have yet had, covering the state of the world's environment and proposing in constructive programs how governments and their peoples must achieve economic growth based on "sustainable development" if humanity is to survive. These challenges are before governments and their peoples: UNCED will provide the opportunities to decide whether, when and how they intend to proceed.

(iii)

5. The paper continues with a survey of several major issues that the Conference and hence Canada will face. They include:

- a) the future international institutions for dealing with the environment; and
- b) the financing of these organizations and of international and national programs.

6. There are, of course, many other specific issues but they are naturally being handled by the Delegation to the UNCED Preparatory Committee whose Report on the most recent meeting (March/April) will be available.

7. The paper suggests several initiatives for Canada. They are to propose:

- a) demonstration programs in Canada for sustainable development in fisheries and in forestry;
- b) a world conference on the marine environment as a catalyst to more effective, coordinated work;
- c) a world conference on forestry to carry forward the drafting of an international convention, and to mobilize support for more effective national and global forest conservation and management;
- d) the establishment of international centres of excellence in Canada using, for example, the CCIW and ICOD as multinational bases. The IJC might also be proposed, in collaboration with the USA, as a viable institution to demonstrate the transboundary management of resources and pollution control.

8. Other important sectors in which good initiatives might be envisioned are in the areas of energy, fresh water resource management, human health, and environmental defence.

9. The author understands that the National Round Table on the Environment and the Economy will propose some initiatives for governments in Canada to consider.

10. The paper draws some comparisons between the Stockholm Conference and what can be expected in Rio.

11. Finally the author observes that virtually all decisions taken at Rio and any initiatives that Canada might want to pursue will be costly - very costly. But there is no alternative if the world wishes to arrest, if not reverse, the continuing momentum toward irreparable environmental degradation. 1992 is an election year and a referendum year in Canada: both will have an impact on Canada's role leading up to Rio, in the Conference and in subsequent years. The approach of Federal and provincial governments to UNCED will be taken as a critical test of the Government's commitment, political and financial to the Green Plan.

THE STOCKHOLM CONFERENCE ON THE HUMAN ENVIRONMENT 1972

A REVIEW OF ITS OBJECTIVES; AN ASSESSMENT OF ITS RESULTS AND CANADA'S ROLE IN IT

I. INTRODUCTION

1. There have been numerous international, intergovernmental conferences over many decades devoted to specific issues of conservation, resource management and the control of pollution. The Stockholm Conference was the first, however, which comprehensively addressed virtually every broad aspect of the "environment" and, in particular, the risks to the health of the biosphere in a world of a rapidly increasing population and continuing economic growth.

2. There was widespread and understandable scepticism in governments and in the private sector in the period preceding and during the Conference; indeed some governments opposed or gave it little support. In the Federal Government many departments and agencies were also opposed or cool toward the idea. A conference on the world's environment did not seem to make sense to many. The "environment" covered so many fields that it appeared impossible to deal with them in any coherent way. Moreover many argued that any problems of urgency and importance were and could be tackled in single-subject conferences - ocean dumping, fisheries, wildlife conservation, transboundary pollution and so on. It was difficult to visualize what concrete, useful results could be produced by a short, international conference dealing with such a large number of subjects many of which were so vaguely perceived. On the other hand, there were a growing number of scientists, environmentalists, responsible citizens and government officials who believed that many of the problems, often seen as single, self-contained issues, were, in fact, related and had far reaching effects. They foresaw serious, or potentially serious, risks of damage to the health of the biosphere as a consequence of the continuing growth in the world's economy and the demands it was making on the earth's resources.

3. In the preparatory period and in the Conference itself, some of the less enthusiastic governments attempted to cripple or, at least dilute its efforts to achieve good and substantial results. Although they did not succeed, they did inhibit its work. Nevertheless, a large number of constructive proposals, the able leadership of Maurice Strong and the strong support of a number of governments including the Canadian, generated a momentum that virtually guaranteed success.

4. I have not attempted to summarize the extensive and intensive preparations that were made in Canada for the Conference other than to say that the Minister of the Environment maintained continuous contact with provincial governments through the CCREM. In addition, Federal officials through Environment Canada constantly informed their provincial counterparts, and the private sector, including NGO's, of the content of the preparations. Finally, I should add that public consultations were held in 11 cities in all but one province across Canada, and 400 oral and written presentations were submitted to the Federal

Government teams. These public forums helped to focus attention on environmental issues and especially those on the Stockholm agenda.

5. The Stockholm Conference - even after nearly 20 years in a rapidly changing world - is still regarded as one of the most important conferences in U.N. history. It was

"designed to assess the present state of the human environment; to examine the threats to it; and to agree on what measures must be taken by nations and by the international community to protect the environment in the years ahead."

(Canadian Delegation Report, Chapter 2)

6. Delegations from 113 countries (the USSR and its Eastern European allies did not attend) debated and approved the Declaration on the Human Environment and 109 recommendations for international action.

II. EXPECTATIONS OF THE CONFERENCE SECRETARIAT

7. In opening the Conference, the Secretary General, Maurice Strong, set out the major issues before it. These were:

- A) The Declaration on the Human Environment;
- B) The Action Plan for the Human Environment which contained three principal categories:
 - i) The Global Environmental Assessment or "Earthwatch";
 - ii) Environment Management Activities;
 - iii) Supporting Measures (education, training, funding, etc.).
- C) The Conventions negotiated in advance of the Conference;
- D) The organizational and financial measures to carry forward the implementation of the Conference's decisions.

8. Mr. Strong declared that there were three priority issues that should be addressed:

- A) water - its economic use; the provision of safe water; and waste disposal;
- B) the oceans - the threats to the marine environment and its resources;
- C) the uncontrolled growth of cities, lack of housing, sanitation, etc. and the growth of slums.

9. Against that background, Mr. Strong listed three sectors for priority action:
- A) the need for better means of understanding and controlling changes produced by man in the world's ecological systems, and especially those affecting food production and health;
 - B) the need to disseminate new and environmentally sound technologies to replace those known to be destructive;
 - C) the need to encourage a broader international distribution of industrial capacity.
10. Turning to international organizational needs, Mr. Strong stated that he visualized three essential first steps:
- A) the establishment within the U.N. of a centre for leadership and coordination of environmental affairs;
 - B) the design of an institutional linkage with the world scientific and technological community;
 - C) the establishment of the World Environment Fund to finance the Action Plan. This Fund "would be additional to the monies which governments make available to the U.N. for development purposes".
11. Mr. Strong concluded that the foundations laid by the Conference would serve to design and build:
- A) New concepts of sovereignty based not on the surrender of national sovereignties, but on better means of exercising those sovereignties collectively and with a greater sense of responsibility for the common good.
 - B) New codes of international law to give effect to the new principles of international responsibility and conduct which the environmental age requires, and new means of dealing with environmental conflicts.
 - C) New international means of managing the world's common property resources - the oceans and the atmosphere beyond national jurisdiction - for the benefit of humanity.
 - D) New means of universalizing the benefits of technology and directing it towards the relief of those pressing problems which continue to afflict the great majority of the human family.

- E) New approaches to more automatic means of financing programmes of international co-operation, including use of levies and tolls on certain forms of international transport or on the consumption of certain non-renewable resources.

III. THE POSITIONS OF THE CANADIAN DELEGATION

12. The Canadian Delegation was well equipped - with strong political support, with positive, flexible guidance from Cabinet, and with competent people from the federal and provincial governments, including 1 federal minister, 6 provincial ministers, and from the private sector.

13. Cabinet instructed the Canadian Delegation to the Stockholm Conference to:

- A) support the Declaration on the Human Environment;
- B) support in principle the recommendations in the draft Action Plan, subject to the following qualifications:
 - i) the Delegation should support a long-term program of environmental improvement;
 - ii) it should offer to host an international Conference/Demonstration of Human Settlements experiments;
 - iii) it should agree to strengthening the International Whaling Commission;
 - iv) it should not agree to a 10-year moratorium on commercial whaling (since there was insufficient scientific evidence that all whales were an endangered species);
 - v) it should endorse the principle on the prevention and control of marine pollution;
 - vi) it should use this opportunity to enlist support for the principles on the rights of coastal states;
 - vii) it should oppose the erection of barriers to international trade to offset the costs of pollution control;
 - viii) it should agree not to invoke environmental concerns as a pretext for discrimination in trade policies;

- ix) it should oppose measures that might lead to the creation of pollution havens;
- x) it should not accept any compensation provisions for discriminatory trade practices but could consider doing so provided it was in the form of assistance aimed at industrial facilities that do not cause environmental degradation;
- xi) it should indicate a willingness to provide additional financial resources for Third World countries:
 - a) to help them cope with their environmental problems;
 - b) to help them offset adverse impacts on their development from any measures adopted by developed countries to protect the environment;
 - c) the Delegation should agree in principle to the establishment of a fund with a target of \$100 million, and if approved, Canada would contribute \$5 to 7.5 million annually over a 5-year period.
- xii) it should support the establishment of an intergovernmental body in the U.N. system, supported by a small secretariat and headed by a senior administrator;

IV. THE RESULTS OF THE CONFERENCE: THE CANADIAN PERSPECTIVE

14. Its more important achievements and decisions, not in any order of importance, but cast, in some cases, in terms of interest to Canada, were these:

- A) Representatives of 113 governments approved "109 recommendations for national and international action containing over 150 separate proposals". (MacNeill and Munro in "Moving from the Margin to the Mainstream, 1972-1992".)
- B) The bulk of the decisions constituted the Stockholm Action Plan which provided a policy framework for programs in the environment in subsequent years.
- C) The Conference recommended to the UNGA the establishment of a new intergovernmental body for environmental activities and an environmental fund, the terms of reference of which were broadly in line with Canadian objectives. The Minister's statement in plenary that Canada could give between \$5 - 7.5 million (including a \$100,000 advance) over five years was well received).

- D) The Conference approved the Declaration on the Human Environment with all but one of the legal principles proposed by Canada intact.
- E) The Conference approved Canada's proposal for a United Nations Conference/Demonstration on Experimental Human Settlements to be held in Canada in 1975.
- F) Canada's recommendations concerning marine pollution represented a major breakthrough in its efforts to obtain recognition of rights of coastal states and to establish legal principles for the development of international law governing the marine environment.
- G) Discussions of the educational, informational, cultural and social aspects of environmental issues reflected the concern which the Canadian public had expressed in the government's pre-conference hearings, namely that a new and multi-disciplinary approach must be taken to public education in order to stimulate awareness of economic, social, cultural and scientific aspects of environmental problems.
- H) A moratorium on whaling was approved with Canada's reluctant support.
- I) A resolution calling for the cessation of nuclear testing was approved.
- J) The Conference accepted a Canadian proposal to establish an International Registry of Clean Rivers.

15. The Minister's proposal for international pollution control standards received little support and, indeed, the Declaration opposed the uniform application of such standards.

16. During the Conference the Minister announced that Canada would increase its aid at a rate faster than its current level in recognition of the environmental needs of developing countries (the only such statement at the Conference). This declaration may have helped to give some reassurance to the Third World, but it did not allay their fears that foreign aid would be far from sufficient to meet their environment as well as their economic needs.

17. There was some discussion of convening a second conference on the environment but no decision was taken in Stockholm. It is worth adding, however, that the Minister stated that Canada would be pleased to host it.

18. It was the judgement of Ministers and the Delegation that Canada achieved all of its major objectives in the Conference.

V. THE THIRD WORLD AT STOCKHOLM

19. It might be useful, as a prelude to the Brazil preparations, to add a note on the approach which many, if not all, Third World countries took in the discussions in Stockholm. Developing country delegations had a profound suspicion of the motives of the industrialized (Western) countries in their high-pressure promotion of the Conference and the bewildering array of proposals. They feared that the implementation of many of them would inhibit their economic development and their exports. Their pre-occupation in the Conference was, therefore, to ensure that no decisions were taken which would adversely affect their interests and the flow of development aid they expected to receive. Indeed they understandably insisted that they would need an increase in the flow of aid funds equivalent to the cost of applying the environmental protection measures flowing from decisions of the Conference. They would need, in addition, access to the technology required to reduce pollution. They wanted assurance that they would be compensated for any financial costs resulting from any adverse impact of protection measures on their exports. In short they argued that the application of environmental controls in their countries would only be tolerated if they did not slow down development. They felt that basic environmental improvement must take the form of alleviating poverty, and that could be achieved only through increasing economic development.

20. It was also their view that global pollution was caused by the industrialized nations, and that they should pay for cleaning it up. Many took the opportunity to denounce the exploitation of their human and natural resources by foreign interests and to emphasize their sovereign rights of ownership of their resources and their own authority to develop national environmental standards and policies.

21. In anticipation of the opposition of Third World countries to many of the Stockholm Conference's proposals, Mr. Strong organized a seminar of developing countries in Founex in advance of the Conference in order to explain the issues and the close relationship of economic development, the protection of the environment and the sound management of their resources. I think it is fair to say that this was a critical step in achieving the support of the Third World for the Stockholm Conference recommendations.

VI. NGOS AT STOCKHOLM

22. The NGO's held a parallel conference, 'The Environmental Forum', in Stockholm which generated a lot of publicity and thereby helped to raise public awareness of some of the basic issues. The 25 observers from NGOs were given an opportunity to address the Conference. Their contributions were disappointing with a couple of exceptions. Margaret Mead with her shepherd's staff in hand, read a declaration on behalf of all NGOs which stated that the resources of the earth are finite and that "the world economy must come to be in balance with environmental carrying capacity". It called for action to eliminate damaging pesticides, for increased foreign aid and for an end to nuclear testing.

VII. SOME GENERAL OBSERVATIONS ON THE CONFERENCE

23. These were the principal features of the Stockholm Conference and of the role of the Canadian Delegation. It should be added, however, that the Delegation was - and was perceived to be - among the best equipped and most effective and influential in the Conference. This perception enabled the Delegation to participate actively in the discussions in the PrepComs and in the Conference and to construct resolutions which served Canada's interests on virtually every item. The presence of seven ministers and of senior private sector representatives including a Canadian Indian, both surprised and impressed other delegations. The Delegation also managed to maintain constructive relations with the provincial and private sector representatives and with the Canadian NGO community. Two of the younger members of the delegation were assigned to participate in NGO meetings and activities, and Alan Beesley, Norman Riddell and I made frequent, if not daily, calls on various groups and on the Forum to ensure the dialogue opened in Canada was continued in Stockholm.

24. Canada derived substantial credit from the formidable performance of Maurice Strong.

25. The Delegation fumbled the ball only once. In Committee the Canadian delegate voted against a NZ resolution condemning nuclear testing since the text was aimed directly at the French who were about to explode a device in the South Pacific. The Canadians had argued - unsuccessfully - for a more broadly drafted resolution condemning all testing. The Canadian abstention caused a flap in the Canadian media and the Minister was obliged to explain the event in the House of Commons. The Delegation changed its vote to support the NZ resolution in plenary and every one was happy, though a bit bruised.

26. As final observation in this assessment I think it is fair to say that it was remarkable that such a conference was held and that it achieved all of its major objectives and that many important developments flowed from it. And yet it must be acknowledged that its impact in subsequent years diminished, or, perhaps more accurately and fairly, was diffused into existing and new environmental activities and programs. Governments and the peoples of the world did not pursue some of its recommendations. Much was done but far from enough, and little, if anything, sufficiently fundamental to suggest that the world understood the magnitude and gravity of the risk or the basic notion of sustainable development.

27. It was because of our awareness that the momentum and political commitment to the environment had diminished and lost focus in the late 1970's that we proposed the creation of the World Commission on Environment and Development.

VIII. DEVELOPMENTS FLOWING FROM THE STOCKHOLM CONFERENCE

28. I have been requested to review a number of the more important decisions of the Stockholm Conference in the expectation they may illuminate the continuing environmental

concerns and those that have been added to the Brazil agenda. The list is not in order of importance.

A) The creation in the U.N. system of a permanent environment centre. UNEP was established shortly after the Conference under Strong's leadership. After months of intense confrontation between North and South, it was decided to locate it in the Third World, and Kenya won the competition. It is my recollection that there was an unwritten agreement that if and when the Agency was placed in a developing country, the position of Executive Director would be filled by a competent person from the industrialized countries.

B) The establishment of an Environment Fund with a target of \$100 million for a five-year period.

The Fund was established contemporaneously with UNEP but, since many of the industrialized countries disliked the proposal and since few developing countries had much money, it has never received a flow of contributions sufficient to bring it close to its target. Its current level is about \$68 million. Indeed I think it should be said that UNEP has never received enthusiastic political or financial support.

C) The "Earthwatch" program proposed in the Conference's Action Plan, has been established.

D) With respect to the decision to introduce measures to minimize the release of dangerous pollutants into the environment, a number of significant steps have been taken. It remains fair to say however that it was generally felt that much, much more needed to be done.

E) In the pre- and post-Stockholm Conference period, several international conventions have been adopted by a significant number of governments. They include the conventions on Ocean Dumping, Law of the Sea, Migratory Species Management, Protection of the World Cultural and Social Heritage and the Convention on International Trade in Endangered Wild Species of Fauna and Flora. Others in the pipeline included the Ocean Data Acquisition System (ODAS) and Islands for Science. (It should be noted that the LOS Convention is still not in force. Canada is among those which have not ratified it.)

F) As proposed by the Conference, the International Whaling Commission was strengthened and a 10-year moratorium was introduced.

G) In response to the Conference's concerns over the impact that the increase in the world's population would continue to have on the environment, it

recommended that the issue be fully explored at the World Population Conference in 1974. It was.

- H) The Declaration on the Human Environment approved by the Conference has been used continuously by governments to defend their national environmental interests. Article 21 which declares that states are responsible to avoid damaging the environment of other states or of the international realm, remains of critical importance even though often disregarded.

IX. GENERAL IMPACT OF THE CONFERENCE

29. Among the more important general results of the Stockholm Conference, as I noted earlier, was the widespread impact it had in focusing the world's attention on our concern for the environment. It has been influential in bringing to the attention of the international community and its peoples the serious damage that economic growth is imposing on the world's environment and the demands it is making on the earth's resources. Many new activities and programs are a result of the influences of Stockholm.

30. Second, the Conference served to display new dimensions of the magnitude, the complexities, the potential political and financial costs, and some of the relationships between economic growth, social development, resources and the biosphere. We are still learning just how much greater, more pervasive, complex, costly and, perhaps less readily soluble, these challenges to sustainable development really are. To improve knowledge and understanding remains among the most intractable of challenges. There is progress, but it is slow, possibly too slow, and until these matters are more fully understood, the political will to change and to accept the costs will not materialize quickly.

31. Third, the Conference informed the international community that the management and conservation of the world's environment could not be left to uncontrolled and unregulated development. Nor could it be left to the strongest countries. New structures, new international law, and, above all, the political will to design and manage a new world system were essential pre-conditions to rescuing the environment from further and, perhaps, irreversible degradation.

32. It might be useful to mention several areas of environmental concern which were discussed and on some of which resolutions were enacted at Stockholm but which seem to have received inadequate attention in various U.N. agencies and conferences in subsequent years. These were:

- A) energy
- B) transportation
- C) water
- D) the marine environment
- E) forestry

33. In mentioning these sectors I appreciate that they are all being managed in one or more of the U.N. specialized agencies. I should also add that there have been major conferences on most if not all. But, because of the firm opposition of the Western group to new institutions and, in the case of energy, because of the opposition of OPEC, no new dedicated institutions were established. It may be timely to review this matter, and I will return to it later.

34. An excellent review, prepared by the Agesta Group in Sweden, of the implementation of the recommendations of the Stockholm Conference and of subsequent UNEP resolutions designed to carry forward the Stockholm program, observes that good results were achieved in the first 10 years after Stockholm. But limited progress had been made in some other important sectors.

35. By the end of the 1970's, the political will which had produced the remarkable success of the Stockholm Conference and all that flowed from it, had diminished or had diverted the attention of governments away from a focused perception of the condition of the world's environment. The undernourished environment activities of UNEP and a number of the U.N. specialized agencies reflected a serious loss of political and financial support in most countries. It was because of this situation we turned to a new initiative - a world commission - to attempt to revitalize the environment movement in the second decade after Stockholm.

X. NEW DIMENSIONS AND CHANGES IN THE PERCEPTIONS OF THE ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

35. I have attempted in this Section to summarize cryptically a number of the changes which have occurred in the thinking about the environment and in environmental activities.

- A) Governments and the private sector throughout the world have become more aware of the scope and pervasiveness of the threats to the health and welfare of the world's environment and of the need to take action to preserve and manage it more sensibly.
- B) The "environment" and the mass of issues the word encompasses, has moved to the top, or near the top, of the agendas of governments, the private sector, the scientific community and the public. They are now important issues for the U.N., for international conferences and in bilateral diplomacy.
- C) The environment, government and business communities seem to be more comfortable with one another, and a constructive approach to the threats of environmental degradation is emerging.
- D) Since 1972 several new items have been added to the list of the global environmental agenda. Some, or all may have been discussed in the scientific community during the Stockholm Conference years but had not then taken shape in public and intergovernmental debates. These include:

- i) climate change, global warming and rising sea levels,
 - ii) acid rain
 - iii) the depletion of the ozone layer in the atmosphere
 - iv) environmental warfare.
 - v) the loss of biodiversity
 - vi) deforestation
 - vii) soil degradation
- E) The continuing growth in the population of the world is still seen as the principal or, at least, one of the major reasons for the increasing demands being imposed on the environment and on the earth's renewable and non-renewable resources. There is the growing realization that the wasteful and excessive use of resources is also of fundamental importance in this process. The political, moral/social debate has diminished however, and most countries seem committed to the reduction in the rate of population increase. We are still far away from obtaining commitments to the less wasteful and more equitable, sensible use of the earth's resources.
- F) Economic growth, the preservation of the environment and the rational management of resources are now more clearly perceived as part of a single process. The Report of the WCED contributed considerably to this change. The phrase "sustainable development", which was first used in the World Conservation Strategy in 1980 and was taken over by the Commission, has encapsulated the idea superbly. Having said that, the metamorphosis in thinking and hence in political action has only commenced.
- G) Many if not all countries in the Third World now recognize more fully than at Stockholm that:
- i) they have their own current and potential environmental problems and disasters;
 - ii) many sources of degradation are transboundary, regional and global, and;
 - iii) national and international action is indispensable to the preservation of their human and natural resources.
- H) Urbanization was an important issue in Stockholm and, as a result of a Canadian initiative, the Habitat Conference was convened in 1976 and the U.N. Commission for Human Settlements was created. It has never, however, been adequately funded and politically supported: it is a minor but potentially important player. There is some evidence to suggest that urbanization is coming back toward the mainstream of the environment agenda.

- I) The world's needs for more reliable and clean sources of energy have become of increasing importance in the public debate. Concerns about nuclear energy remain on the agenda.
- J) The destructiveness and the waste of resources in war and the associated massive diversions of funds, technology and trained personnel to armaments are seen as having a direct and adverse impact on efforts to preserve the environment.
- K) Waste disposal, while identified as an issue for the Stockholm Conference, has become much more of a problem and is now high on the agenda for governments.
- L) Biodiversity was seen as a potential concern at the time of Stockholm, but it was only in subsequent years that it has been added to the list of substantial environmental concerns.
- M) Environmental security, environmental defence and environmental warfare (the Gulf Oil Spill and the oil well fires) are now attracting some attention nationally and internationally.
- N) There has been a significant growth in the development of international law and the adoption of treaties and conventions designed to protect the environment.
- O) There has been a notable increase in the establishment of new and the strengthening of existing international organizations, governmental and non-governmental, concerned with the environment.

The Commonwealth Heads of Government and the G-7, among important periodic meetings of primary interest to Canada, have added "the environment" to their agendas, and they serve as useful ways of mobilizing support for national and international environment programs.

- P) In 1980 the World Conservation Strategy was published and it added further weight and momentum to the efforts to improve the management of the world's resources. It somehow failed to generate the interest and attention it deserved. About 50 countries produced national and sub-national strategies of varying quality and impact. The Federal Government, several Canadian provinces and territories prepared conservation strategies, but none has yet had much effect.
- Q) There has been a greater flow of resources to scientific research and technical development in understanding and coping with the environmental risks, the problems of management, etc. The volume, however, is far from adequate to deal effectively with the challenges society faces.

XI. ENVIRONMENTAL WEAPONS OF WAR

36. It may not be necessary or desirable to focus attention on the still-unknown damage which Iraq has inflicted on the earth's environment. But it does remind us that these and other weapons can cause perhaps irreversible damage. The scorched earth policies of armies over many centuries and the chemical defoliation of parts of Indo-China are other obvious examples.

37. Ambassador Burney reminds us that the 1976 Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques may have been aimed principally at stopping atmospheric nuclear testing, but the Gulf War may also fall within its scope. And there are, of course, many other parallel conventions and declarations designed to reduce if not eliminate such threats.

38. This entire issue is a political mine-field and raising it in Rio may be divisive and counter-productive. But equally it may be difficult not, at least, to identify it as the world's worst manmade environmental disaster.

XII. ENVIRONMENT AND THE THIRD WORLD

39. I have already mentioned the position of Third World countries in the Stockholm Conference and the change in their attitudes as they have become more aware and concerned about environmental issues. It might be useful, however, to add a few thoughts on this aspect.

40. Third World countries now realize that their environment is being degraded, and unless there are major changes in their economic policies as well as those of the industrialized countries, the damage will be widespread and possibly irreversible. They also appreciate that many current and potential risks are regional or global, and that they will suffer from them. They are also firmly convinced, as noted earlier, that the industrialized world remains the major producer of pollutants and the principal exploiter of the earth's resources and that it carries the prime responsibility for change. The "polluter-pays" principle still holds.

41. Developing countries will be equally aware that it is in the interests of the industrialized countries that the Third World should be full and active partners in changing their policies and designing new institutions to achieve sustainable development. They will, therefore, expect and demand the substantial financial assistance and the technology required to control pollution. A major global re-distribution of industry is underway: it is in the interests of all that it is carried forward in ways which do not degrade their environment and which makes the best use of their resources.

42. In contrast to the political, economic and financial atmosphere at Stockholm, the prospects of economic aid are less positive. Aid fatigue, the recession, the heavy demands of the new assistance programs for the former USSR, Eastern and Central Europe, disillusionment with the results, which seem unimpressive to many, of years of foreign aid

etc., bring little hope that developing countries will receive the financial assistance or technology promised to them or that will be indispensable if their economic development is to be as environmentally sensitive as they and we would wish. The debt and budgetary situation in Canada is a major constraint which the Government must face. It is counter-productive to promise or imply support that cannot be delivered.

XIII. THE WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT

43. In reviewing and assessing developments in the broad environment field between 1972 and 1992, among the most significant and important was the WCED. It has set out superbly the challenges the world faces and provided guidance on how nations and the international community must respond if the earth and its people are to survive.

44. Rather than attempt to review the WCED Report, I am taking the liberty of extracting several key conclusions from the Report, 'Our Common Future', and from several papers that Mr. Jim MacNeill has presented. Again, they are not in any order of priority:

- A) Our future survival is threatened, both as a world community of nations and as a species.
- B) The massive changes occurring in the relationships between the world of nation states and the earth and its biosphere, have not been accompanied by corresponding changes in our international institutions. New and stronger organizations for cooperation are needed.
- C) The pressures on resources and the environment which have generated these threats, are bound to accelerate and, even if we start to act now, they are bound to get worse before they begin to get better. It is true that we are winning some significant battles ... but we are losing the wars ... we are losing ground on just about every front: forests, species, soils, debts, deserts, famine, ecological refugees, water, chemicals, acidification, ozone and man-made climate change. In face of this, governments are reducing, not increasing relevant research and action budgets, re-enforcing the march of folly.
- D) There must be a serious attack on high rates of population growth and an equally strong effort to bring about the social and economic reforms needed to address poverty.
- E) The main source of the threats to the world's environment is to be found in a wide range of narrowly conceived economic, trade, energy, agriculture, industry and other policies, national and international, policies which systematically discount the future.
- F) Underlying these policies are institutions that are, today, held neither responsible nor accountable for the net results of their decisions. They are

largely unaware of, and unresponsive to, the interlocked environment-economic dimensions of development.

- G) A major program of reforms needed to address climate change, deforestation, species loss, soil erosion and marine pollution require much, much more international attention to these traditional 'domestic' policies of sovereign states. From many points of view, sovereignty is out-dated and destructive but, I would add parenthetically, many countries, including Canada, defend the concept as their only significant protection against exploitation they consider unfair.
- H) The means and experience exist to turn this around.
- D) The principles and the policies of sustainable development must be integrated in economic and political decision-making.
- J) New ways to marshal resources must be found for sustainable development in the Third World.
The burden of Third World debt must be reduced substantially if not removed.
- K) New, powerful international institutions must be designed or UNEP strengthened and its authority increased and broadened.

45. The fundamental and essential key to a viable ecosystem and to healthy economic and social development has been imaginatively captured in the simple phrase "sustainable development". Mr. MacNeill has observed, however, that PM Brundtland has added her own key word - "now". He rightly concludes that "Our Common Future" is a political document. It provides a road map - and the only one we have - to take us into a healthy world in the 21st century. Brazil will be the test of whether governments have the political courage to take up the challenge.

XIV. GENERAL ISSUES AND POSSIBLE OPPORTUNITIES FOR CANADIAN INITIATIVES IN UNCED

46. I was requested to attempt to identify and provide a brief commentary on some of the more general issues which face us in the preparations for Brazil '92. They are, of course, covered by the agenda, but it might be useful to stand back and look at several which may be of particular interest to Canadians. I have also chosen several sectors within which may be some initiatives that the Canadian Government may want to pursue.

(1) *Institutional Arrangements*

47. It is difficult, if not impossible, to say or propose anything new on this subject. But there are extremely important challenges facing UNCED and Canada in this area. I propose,

accordingly, to pose some questions which may be helpful. I have drawn heavily on some excellent memoranda written by Messrs de Hoog, Small and Spencer.

48. Is the present international institutional system adequate to address and manage the environmental challenges and the programs that are now in place and that we see as we move into the next century? The consensus is that they are not. But is there agreement on whether the existing structures are adequate and merely need stronger sustained support? Or are new institutions needed to take on the environmental tasks we foresee? There are a great number of intergovernmental organizations in addition to UNEP, which are actively involved in various sectors of the international environment program. It would be difficult, if not impossible to take a substantial number of their programs or funding away from them and bring them together in a new, stronger, centralized agency empowered to carry forward the programs required if we are to respond to the challenges of the WCED and the decisions we can expect from the Brazil Conference. If this proposition is right, then there are two choices: establish a new, authoritative, well-financed organization or give UNEP and other existing agencies new, more powerful mandates. In both cases, a large, sustained flow of new funds must be provided.

49. It is evident that in the context of the Government's current financial position and of the recession, it will be difficult to persuade ministers to provide much new funding. If Canada does not, however, offer substantial financial support, its commitment to the Green Plan, to the principle of sustainable development, and to the general management of the earth's environment will be seriously questioned. It may be timely to mention that the next election and possibly a referendum may come in 1992.

50. At the risk of lengthening this paper, it might be helpful to list the general objectives for U.N. institutional reform which were provided the guidelines for the Candel to the recent UNCED Prepcom. They are:

- A) to focus U.N. institutions' work on areas in which the U.N. has a "comparative advantage". The environment is clearly one of the foremost areas in which Canada perceives a "comparative advantage" for the U.N.
- B) to rationalize the decision-making process of the U.N. and to reduce the duplication of work by different specialized agencies and bodies of the U.N. system.
- C) to pursue the reform of poorly functioning U.N. bodies and elimination of superfluous ones, in order to free resources that can be devoted to new activities - such as environmental issues - in which the U.N. has a comparative advantage.

- D) not to undermine our traditional policy of zero real growth in the budgets of U.N. organizations.

51. In the context of UNCED, the Prepcorn Brief sets out the precise objectives for institutional reform which Canada wishes to achieve. These are:

- A) To foster the integration of environment and development through a commitment to sustainable development in the programmes and activities of all United Nations institutions.
- B) To increase the efficiency, effectiveness, and public accountability of U.N. institutions charged with promoting sustainable development.
- C) To increase the ability of U.N. institutions to respond flexibly and responsibly to environmental change and to catalyze action at a national, regional and international level to deal with new challenges for sustainable development.
- D) To ensure that new or existing international environmental agreements have effective institutional support.
- E) To foster greater collaboration between U.N. system and non-U.N. system institutions addressing the same issues.

(2) *Funding of Programs*

52. I have already touched on the important funding issues that will confront Canada in the context of the renovation of existing or the creation of new institutions to deal with the environment. In this section I will identify the equally important funding questions which developing countries will raise and which Canada and the industrialized world must answer. As I have said earlier and will repeat later, the simple and only answer is a large continuing flow of additional money to the Third World. The payment of that bill may be the price of success, not only of Brazil '92, but the launching of a serious, long-range environment program for which the road map was set out in the Brundtland Report and which will be elaborated on in the decisions of Brazil.

53. It may be useful to recall that the Prime Minister has subscribed to several declarations at recent high level/summit meetings on the environment in The Hague, Paris, Langkawi, Noordwijk and Bergen, calling for increased political and financial support. He stated, for example:

"...the industrialized nations have special obligations to assist developing countries..."

"...developing countries need to be assisted financially and technically..."

"...additional resources should, over time be mobilized to help developing countries..."

54. Among the program funding questions which ministers will have to address in addition to those involved in revitalizing and expanding the institutional capacities of the U.N. system, are these:

- A) magnitude of funds?
- B) is there a formula; are there formulas?
- C) is an international tax on one or more commodities, e.g. petroleum, payable by consumers, a starter?
- D) should there be a separate, dedicated fund, related to economic development and if so, will it involve creating a new agency or should it be administered by a the World Bank with a new mandate?
- E) will environmental assistance be committed as ODA?
- F) what guarantees can and should be given to developing countries in guaranteeing that environmental assistance is additional to existing and promised aid?
- G) should environmentally acceptable 'conditionality' be applied to international and national foreign aid?
- H) what provisions can be designed to ensure full support for the implementation of environment conventions?

55. I have taken the liberty again of listing a series of questions from a memorandum of June 11, 1990, circulated to departments and agencies last August by Mr. de Hoog.

- A) Should Canada support a centralized international approach to all environmental assistance, e.g. the IBRD Green Facility or a new Environmental Fund, or should we argue for a variety of smaller funds, e.g. tied to specific obligations in international agreements with disbursements carried out through a range of existing development institutions?

- B) How should Canada respond to proposals for an international revenue raising mechanism?
- C) How would environmental assistance to LDCs be linked to the Green Plan resources?
- D) Should Canada continue to argue that environmental assistance will involve ODA but require resources in addition to current ODA?
- E) How would environmental assistance fit bureaucratically in terms of the government's financial management?
- F) How should it be disbursed, subject to what domestic and international controls?

(3) *Sustainable Development*

56. If Canada wishes to put projects where its rhetoric is, it might be desirable to propose one or two major test-case sectors in our economy where federal and provincial governments, industry and unions undertake to redesign their policies to respond to and illustrate the viability of sustainable development. Since I am limited in the length of this memorandum, I will only identify in grossly simplified terms, two sectors, either one of which, or both, might be considered.

A) Fisheries

- The case for a "sustainable development" demonstration program in fisheries is obvious and admittedly it would be extremely difficult to put across. The restoration and development of fisheries in Atlantic Canada and in the fishing zones in the N.W. Atlantic outside Canada's territorial waters (the latter in collaboration with NAFO) are already being discussed in the context of sustainable development as the only answer to the depleted stocks.
- The impact of excessive exploitation of the fishing resources is already clear and measurable, at least in terms of greatly decreased catches inside and outside Canada's economic zone.
- Policies designed to restore the fish stocks, if not yet fully adequate or effective, are already under discussion and in some respects have been introduced.
- It is a relatively self-contained sector.

- In the expectation they succeed over a period of time the magnitude of the fisheries industries in the Atlantic Provinces will be shaped to ensure managed harvesting, i.e. sustainable development.
- The industry and unions in these provinces have been badly hurt, and they are looking for solutions which only a program of sustainable development can provide.
- The industry and unions in these provinces have been badly hurt, and they are looking for solutions which only a program of sustainable development can provide.
- It raises complex questions about trade/environment linkages and "green protectionism" which need to be addressed.
- It will be difficult, if not impossible, to carry forward a sustainable development program if it in any way affects adversely the competitive position of the industry in Canada.

B) Forestry

57. The impact of deforestation is regarded as a serious threat to Canada's forest resources and to other sectors of the environment, e.g. soil erosion.

58. This may be the time to try to introduce policies and programs leading to sustainable development, even though the forest industries have not, as yet, been significantly hurt by the depletion of resources. The industry has stated that it is committed to re-forestation and sustainable development. It is a relatively self-contained manageable sector although widely diversified. Canada and Canadian provinces have been criticized abroad, particularly in Europe, for lack of sustainable management of its forestry resources.

59. If either or both of these suggestions are worth pursuing, perhaps the appropriate departments could consult the private sector and ascertain whether a credible proposal/plan could be put together. It would obviously have to be shown to be in their immediate self-interest, but there it is.

(4) *Proposal for a World Conference on the Marine Environment*

60. A review of the marine environment sector suggests that a world conference on this sector might be a constructive means of focussing greater attention on the wide range of environmental issues and problems it embraces. It is one sector in which Canada has fundamental environmental, economic, political and social interests and concerns.

61. Among the issues it might take up are there:

A) Coastal zone management covering:

- i) resources: - fisheries, petroleum, seabed mining
- ii) pollution: - land-based
- atmosphere
- the oceans as waste disposal sites
- iii) accidental oil spills; oil as a weapon of war
- iv) transportation
- v) coastal erosion
- vi) tourism

B) the oceans and the atmosphere in climate change

C) the implementation of conventions

D) the adequacy of international and regional institutions

62. Based on the assessment of the rationale for and anticipated results of the Conference, it might be of interest to consider whether there would be any further justification for bringing together many of the activities, policy responsibilities etc. in a single agency, council or forum. Good programs are, of course, managed now by existing organizations - IMCO, FAO, UNESCO's IOC and others, and any initiative toward a new agency would require an imaginative campaign. If that scenario is worth pursuing, it will then be desirable to consider where it should be located. And what is likely to be the cost?

(5) *Proposal for a Conference on Convention on Forestry*

63. A proposal to negotiate a forestry convention is under discussion in UNCED Preparatory Committee and I will not attempt to review or forecast its decision. However, I would ask whether it would serve the interests of Canada as well as the U.N. system to offer to host the negotiating conference in Canada?

(6) *Proposal to establish international centres in Canada in fisheries and fresh water*

64. It might be worth considering, as we did before Stockholm, whether Canada might propose that one or two of its current major centres of excellence in the environmental field be established as world centres. Two such centres are the CCIW and ICOD. There may be others - forestry? energy? the IJC (in collaboration with the USA)? A decision to do so would involve substantial costs in facilities, annual support costs, research grants, CIDA assistance, etc., and collaboration with existing institutions.

(7) *Other Proposals for Possible Initiatives*

65. Finally, it might be useful to assess whether there are other more general areas in which Canada might want to give the its environmental programs and UNCED an extra push. Are we satisfied, for example, with what is likely to emerge on:

- A) energy - all sources
- B) freshwater resources and management, an issue which will probably become of major diplomatic concern to Canada.
- C) human health
- D) environmental defence and environmental warfare.
- E) integrated land use
- F) human settlements

66. In considering these suggestions and especially item B in the paragraph above, it may be well to ask the questions "Will internationalizing Canadian environmental interests make it easier (or more difficult) for us in our negotiation and management of conventions and programs with our major polluting partner? And will freshwater resources management become a contentious conservation issue"?

67. It is unnecessary to argue at length that access to assured freshwater resources is an important issue for Canada and the United States, as it is for many countries. It has been one of the perennial items on the agenda of the IJC. It is inevitable that it will become a much more crucial and contentious issue as the North American demand for water continues to rise. Sovereignty may be an outmoded concept in many respects, but it will remain a potent force and a productive source of difficulty when a nation's control over its own natural resources is challenged. We must ask whether Canada could reasonably decline to provide water - or share our water resources - if America is facing acute shortages which it perceives to be threatening their way of life? If this is a possible scenario would it serve Canada's interests, as I noted above, to view the issue as an international rather than only a national one? In short it may be advantageous to Canada, as I think it was in our negotiations over our maritime boundaries, to attempt to establish principles of ownership and of responsibility which in turn might provide a more congenial basis for Canadian-American negotiations on the sharing of the continent's water resources. In this context Canada (and the USA) will have to reach a clear understanding of "sustainable development" in sectors depending on constant flows of freshwater.

(8) *Proposals of the National Round Table on the Environment and the Economy*

68. I understand that the NRTEE has formulated proposals for UNCED which the Canadian Government might wish to take on.

(9). *Ratification by Canada of Conventions Concerned with the Environment*

69. Although not directly germane to UNCED it might be advisable for the Government to take whatever legislative action is necessary to ratify any conventions awaiting approval.

The Government may well be criticized if, while promoting a better management of the world's environment, it has not put its own house in order.

XV. THE STOCKHOLM CONFERENCE AND THE UNCED AGENDAS

70. I was requested to draw comparisons and contrasts between the agendas of the Stockholm and the Rio Conferences. Since I have covered some of these in the foregoing pages, I will only summarize briefly my impressions.

71. The agenda for the Brazil Conference is more comprehensive and more detailed than the one for the Stockholm Conference. The reasons are these:

- A) The world's environment is more degraded and is less stable than it was 20 years ago.
- B) Most of the world's governments and their peoples have become more conscious of the degradation of the biosphere. Major disasters - Valdez, the Brazilian forests, fisheries, Chernobyl, 3-Mile Island, the Gulf War and droughts in Africa - have added sharpness and urgency to the world's concern.
- C) Governments and the people they represent have become more concerned over the rapid - and often wasteful - depletion of the earth's resources.
- D) The scientific and academic communities and industry have added immensely to our understanding of the environment.
- E) The countries of the South have become increasingly aware of these developments and realize that they have a deep interest in joining in efforts to preserve the environment. But they equally perceive that the industrialized countries are the major producers of pollution and consumers of the world's resources.
- F) Developing countries desperately need additional funds; much of their debt burdens must be written off; they must get the technological capacity they need to carry forward their economic development with the most environmentally safe and economically competitive facilities, and they insist on "environmental space" for their future development. In contrast to Stockholm, the South has a tough agenda.
- G) New threats to the environment, some of which may have been perceived by the scientific community in the pre-Stockholm preparations and in the Conference proceedings, have now emerged into major public policy issues. The depletion of the ozone layer and the greenhouse phenomenon are two examples to which I have already referred. Others, such as acid rain and

deforestation which were on the Stockholm Agenda, have taken on greater importance and have contributed to the increased attention that governments and people are giving to environmental issues.

- H) The WCED report and the widespread attention it has attracted, have added substantially to the environment movement. It provided the basis for the UNGA's decision to hold the Rio Conference and the guidelines for its agenda. It remains to be seen whether the Conference will introduce the fundamental changes in economic policy that will lead to effective sustainable development.
- I) New and stronger existing non-governmental organizations, have become a force in bringing the world's attention to the environment.
- J) The industrial/business community is now more comfortable with the public discussion of environmental issues, and seems prepared to join in the detailed examination of the threats and the ways and means of reducing them.
- K) Estimates - or, in fact, guesses - at the costs of dealing with the environmental challenges nationally and of financing the institutions mandated to manage the international system - have soared to levels unimagined at Stockholm.
- L) The world's media and especially TV have opened countries to more intensive and searching coverage than ever before and national policies are now more easily measured against international declarations by governments.
- M) In the period of the Stockholm Conference, separatism in Quebec had become an important national concern. In 1992 Canadians are engaged in the most fundamental debate over the unity and future of the country.
- N) Canadian objectives and expectations for the Stockholm Conference were, it seems, easier to define in 1972, and the Canadian public was generally in support of them.
- O) The world economy was healthy at the time of the Stockholm Conference. Rio is being planned in the midst of a long recession, and few governments will be willing to add significant new funding for new and larger programs or to absorb the costs of changes in their domestic policies.
- P) The end of the Cold War, the collapse of the Soviet empire, and the bankruptcy of the Soviet pattern of development in many countries has opened out the scope of national and international debate. The results might mean more money for environmental as well as development needs.

- Q) 113 governments participated in the Stockholm Conference and only two of them at the head-of-government level. More than 160 countries will be represented in Rio and many heads of government will participate.
- R) The then USSR and the member states of the Soviet Bloc did not attend Stockholm because of the refusal to admit East Germany.
- S) The Stockholm Conference was held in an American election year, and the US provided strong leadership in many areas. Rio will also be in an election year, but there is little evidence the Americans will take a leading role.

72. There was one person whose contribution was indispensable in bringing governments through two years of preparation and two weeks of negotiation at the Stockholm Conference with remarkable success. It was Maurice Strong. The UN community can be thankful he is Secretary General for the Earth Summit.

73. The Stockholm Conference put "the environment" on the world's agenda. The accumulating damage and increasing risks to the environment in the subsequent two decades have brought it toward the top of the agenda. The WCED Report has provided a roadmap through Rio into the next century.

74. The challenge facing the international community and every government and its people is whether the Earth Summit will take the difficult and costly decisions which are the price of success. It has been said by many observers that if the Rio Conference is perceived in its closing hours as a failure, it must not be disguised in eloquent language and portrayed as a success. It should admit that it fell short of achieving the results expected of it and thus force governments into taking more responsible, constructive decisions to preserve the earth's health and the welfare of its people.

CHOOSING OUR COMMON FUTURE

by

Bob Munro

Background paper prepared for the Seminar: From Stockholm 1972 to Rio 1992, Ottawa, December 8-9, 1991 co-sponsored by the Department of External Affairs and the Department of the Environment.

Choosing Our Common Future

Decisions Taken, Avoided and Needed on the Road to Rio 1972-92

Bob Munro¹

The historical significance of the 1992 UNCED Conference and Earth Summit is briefly examined in the introductory section. The origins, key issues and the results of the 1972 Stockholm Conference on the Environment are presented in the second section which ends with an assessment of the implementation of the Stockholm Action Plan and first decade of environmental action.

Some highlights of the second decade after Stockholm are described in the next section, especially the work of the Brundtland Commission in setting the new environment and development agenda and the achievements and limits of UNEP's program.

The final section focuses on three issues deserving priority attention before and at Rio because of their importance for success afterwards: strengthening UNEP, restructuring the UN system and avoiding environmental disputes. The paper concludes with a special note on Canada-USA relations on the road to Rio.

Looking Back at Rio

When historians in the 21st century dispassionately judge the 20th century and select the events which changed world history the 1972 Stockholm Conference with the 1987 Brundtland report plus the 1992 Earth Summit will likely be included together on the short list along with such events as two World Wars, the 1917 Russian Revolution and Balfour Declaration, Gandhi's independence campaign in India, the 1945 San Francisco Conference, the 1956 Suez crisis, the 1957 Treaty of Rome and Sputnik launches, the 1967 moon landing, the Vietnam war, the oil crises in the mid-70s and the 1991 Gulf War.

Bracketed by wars, several of the few non-military events on the shortlist are connected to each other and to environment in special ways. For example, man's pioneering flights into space provided a new global perspective and compelling metaphor of our "Spaceship Earth" on which:

"All men travelled together, passengers on a little spaceship dependent on its vulnerable reserve of air and soil; all committed for safety to its security and peace preserved from annihilation only by the care, the work, the love given to that fragile craft."²

The space flights also led to the 1967 Convention on the Exploration and Use of Outer

¹ Managing Director, The EcoTerra Group, Nairobi, Special Adviser on international cooperation for the Brundtland Commission and Chairman of the WCED Experts Group on Environmental Law. At the 1972 Stockholm Conference was responsible for the Second Committee report on *Environmental Aspects of Natural Resources Management*. Has worked since 1985 as an adviser to African governments and international organizations on sustainable development policies and planning.

² Statement by US Ambassador Adlai Stevenson to the Thirty-Ninth Session of the Economic and Social Council, *ECOSOC Official Records*, document E/SR.1375, July 9, 1965, p. 90.

Space and legal recognition of the common interest and common province of all mankind.³ Ghandi's non-violent methods⁴ during the struggle for India's independence were adopted by Vietnam War protesters in the late 1960s and then transferred to the emerging NGO environmental campaigns both nationally (e.g. the US Environment Defence Fund, Canada's Pollution Probe, consumer boycotts in Malaysia, the Chipko movement in India) and internationally (e.g. Friends of the Earth, Greenpeace). And the oil crises in the 1970s forced governments, industry and the public to adopt new energy conservation measures, to give more attention to renewable energy sources and to recognize the economic and environmental benefits of making more efficient use of natural resources.

As to the historical fate of the 1992 Earth Summit itself, we do not yet know if it will succeed or fail. It may take another generation before we are really able to judge the difference. But in either case the Earth Summit will still qualify for the shortlist simply because the decisions taken *and* the decisions not taken next June will both have a significant influence on our common future.

However, we do already know that the 1992 Earth Summit "will very likely be the last chance for the world at least in this century to seriously address and arrest the accelerating environmental threats to economic development, national security and human survival. It will certainly be the last major chance for the present generation of leaders and decision-makers to fulfil their basic obligations to their peers, to today's youth and to future generations."⁵

The First Decade After Stockholm: 1972-82

The road to Rio actually started during a United Nations debate on the peaceful uses of atomic energy in December 1967. The General Assembly noted that the report of the Scientific Advisory Committee⁶ recommended the convening of an international conference on the peaceful use of atomic energy but also emphasized "that other UN conferences might usefully be held on such topics as the impact of new technologies on human relations and on society. During the debate this was referred to as problems of the human environment."⁷

The Swedish government took the lead in converting this suggestion into a detailed

³ *Treaty on the Exploration and Use of Outer Space including the Moon and Other Celestial Bodies* adopted on January 27, 1967, Article I, para. 1.

⁴ Ghandi's approach was inspired by the treatise on *Civil Disobedience* by the mid-19th century American philosopher and naturalist Henry David Thoreau.

⁵ J. MacNeill and R. Munro, "From the Margins to the Mainstream: Environment, 1972-1992", *EcoDecision*, No.1, 1991, p. 103.

⁶ *Official Records of the General Assembly, Twenty-second Session, Annexes, Agenda item 27, document A/6556, Annex.*

⁷ *Official Records of the General Assembly, Twenty-third Session, Agenda item 91, A/7291.*

proposal. In July 1965 the Economic and Social Council approved the Swedish proposal to convene an international conference on problems of the human environment.⁸ The General Assembly endorsed that ECOSOC recommendation in December 1965, agreed to hold the conference in 1972 and authorized an expenditure during 1969 of \$25,000 for the conference preparations.⁹ A year later the General Assembly established a 27-member Preparatory Committee (including Canada) with a small secretariat and accepted the Swedish offer to host the conference in June 1972.¹⁰

The preparatory work and negotiations began in earnest with the first meeting of the Preparatory Committee in March 1970 and the appointment of Maurice Strong as the Conference Secretary-General in November 1970. In addition to three further meetings of the Preparatory Committee during 1971-72, regional meetings were held in Africa, Asia, Europe and Latin America plus a special international experts meeting on development and environment at Founex, Switzerland in June 1971.

Choosing environment or development

Many developing countries initially regarded the new focus on environment and the conference as a potential threat to their development prospects. Their top priority problem was lack of development which they insisted also caused their emerging environmental problems. They worried that the conference might lead to new environment constraints being imposed on them through development aid programs. They were also concerned that new environment-based trade restrictions would be introduced for products to and from their still young, poor and vulnerable countries. Moreover, in their view international environmental problems were largely caused by industries in developed countries who should take on the full burden of solving them.

The 1971 Founex meeting, with over half of the 27 economists and experts coming from developing countries, tackled these issues head-on. The Founex report¹¹ helped reduce some of the chief concerns of developing countries. It also provided a new analytical basis for the environment and development debate which still continues today as the focus of the 1992 Rio Conference.

Nevertheless, at the 1972 Stockholm Conference many still perceived the issues in terms of environment *or* development. Those concerns repeatedly come to the fore throughout the Stockholm Declaration and Action Plan. Developing countries

⁸ *Official Records of the Economic and Social Council, Forty-fifth Session, Annexes, Agenda item 12, documents E/4466/Add.1, E/4553, E/L.1226, E/L.1227 and Resolution 1346(XLV).*

⁹ *Official Records of the General Assembly, Twenty-third Session, Supplement No. 18 (A/7218), Resolution 2398(XXIII).*

¹⁰ *Official Records of the General Assembly, Twenty-fourth Session, Supplement No. 30 (A/7630), Resolution 2581(XXIV).*

¹¹ *Development and Environment, Report submitted by a panel of experts convened by the Secretary-General of the United Nations Conference on the Human Environment, Founex, Switzerland, 4-12 June 1971, Norstedt & Soner, Stockholm, 1971.*

particularly insisted that additional funds should be provided to help them build environment into their national development programs and projects

Contentious Issues at the Stockholm Conference

The most contentious issues in the Stockholm Conference negotiations included

- increased assistance to family planning and intensified research on human reproduction (Recommendation 12)
- the new international fund and financial institution to provide seed capital and technical assistance for housing and the urban environment (Recommendation 17)
- the need to consult on projects likely to affect neighbouring States (Recommendation 3), the call for new international river basin commissions (Recommendation 51) and the monitoring of both the world's forest cover (Recommendation 25) and of long-term atmospheric conditions (Recommendation 79) because many considered these proposals infringed their national sovereignty
- the 10-year moratorium on commercial whaling (Recommendation 33)
- the avoidance of negative effects on the imports and exports of developing countries due to stricter environmental standards in developed countries (Recommendations 14, 103-105 and 109), especially the proposal for compensation (Recommendation 103)
- the condemnation of nuclear weapons tests, especially in the atmosphere (a separate Resolution)
- the new UN environment fund and institutional arrangements (also a separate Resolution)

Several other proposals were strongly opposed but the opposition involved only one or a few countries. Greece and Liberia, for example, fought against the requirement that countries ensure all ships flying their flags respected marine pollution regulations (Recommendation 86)

The Stockholm Action Plan

The Stockholm Action Plan contains over 150 distinct proposals in 109 recommendations. Those recommendations vary widely in their scope and significance from minor invocations to agencies such as WMO to conduct more research "on the inter-relationships of resource development and meteorology" (Recommendation 65) to major new initiatives on genetic resources conservation (Recommendation 45 alone contains over 25 proposals in as many sub-sections)¹²

¹² *Report of the United Nations Conference on the Human Environment*, A/CONF.45/14/Rev.1.

The 109 recommendations were negotiated at Stockholm in the following three committees each committee dealing with two of the six main policy areas. The number of recommendations in each area is given in brackets.

First Committee

- Human Settlements (Recommendations #1-18)
- Education, Information, Social and Cultural Aspects (Recommendations #95-101)

Second Committee

- Natural Resources Management (Recommendations #19-59)
- Development and Environment (Recommendations #102-109)

Third Committee

- Pollutants of International Significance (Recommendations #70-94)
- International Organizational Implications (a separate resolution)

The many proposals in the Stockholm Action Plan were subsequently structured around the following three main components which remain largely unchanged in the UNEP program today:

- *Environmental Assessment Earthwatch* (including environmental data, research, GEMS, INFOTERRA, IRPTC)
- *Environmental Management* (including oceans, energy, ecosystems, human settlements, laws and institutions, natural disasters)
- *Supporting Measures* (including environmental information, education, training and assistance)

Although remarkably comprehensive at the time, the Stockholm Action Plan gave little or no attention to several major issues which emerged only a few years later to dominate international environmental agenda. These included acid rain, depletion of the ozone layer, climate warming and desertification.

Implementing the Stockholm Action Plan

In 1981-82 the Stockholm-based Agesta Group undertook an independent and comprehensive assessment of every recommendation in the Stockholm Action Plan. To test their initial findings a preliminary report was sent for comment to 70 Stockholm veterans¹³ in over 25 countries. Most were still involved in tackling environmental problems and held high-level positions in governments, the UN and other international organizations and NGO's.

Incorporating the results of that survey, the final report of the Agesta Group estimated that after a decade less than a third of the 109 recommendations had been fully

¹³ The Canadian Stockholm veterans included, in addition to the author, Geoff Bruce, Peter Calamai, Christian de Laet, Jim MacNeill, David Munro, David Runnalls and Maurice Strong.

implemented. Another 40% (43 recommendations) had been partially implemented. Of the remaining 30% (35 recommendations) half had received little attention or been ignored. The other recommendations could not be accurately rated because sufficient information was not available or accessible.¹⁴

Major recommendations rated as "implemented" included

- the formation of a network of at least ten global baseline stations and 100 regional stations to monitor atmospheric trends (Recommendations 79 a-c)
- the establishment of the UN Habitat and Human Settlements Foundation (Recommendation 17) and convening of a United Nations Conference on Human Settlements (Recommendation 2)
- the strengthening of international programs for integrated pest management (Recommendation 21 a) and launching of a major new environmental education and training program (Recommendation 96)
- the creation of a global register of potentially toxic chemicals (Recommendation 74 e) and an international referral service for sources of environmental information (Recommendation 101)
- the adoption of new international conventions to protect the world's natural and cultural heritage (Recommendation 99 i-a), to control the trade in endangered species (Recommendation 99 3) and to preserve wetlands of international significance (Recommendation 99 1b)
- and, of course, the establishment of the United Nations Environment Programme with a small secretariat and Environment Fund targeted at \$100 million over 5 years.

The number of recommendations rated as implemented was likely too generous. Many of the remaining recommendations in this category were appeals either to UN agencies to expand their existing programs or to governments to "actively support and contribute" to new international programs on environment. It was relatively easy to fulfil the terms of such general proposals even though the results achieved were often modest or inadequate.

International agencies, for example, were asked "to give special attention" to combating malnutrition (Recommendation 13) and to assign higher priority to improving water supply and sanitation (Recommendations 9-10). UN agencies "implemented" both recommendations but without achieving any significant results. A decade later - and now even two decades later - the number of poor people suffering from hunger and lacking adequate drinking water and sanitation have increased.

The largest number of Stockholm recommendations fell into the "partially implemented" category which included 43 recommendations where:

¹⁴ *Twenty Years After Stockholm: Report on the Implementation of the Stockholm Action Plan and on Priorities and Institutional Arrangements for the 1980's*. The Ågesta Group AB, Stockholm, 1982.

- *a major effort was called for but not made* (e.g. Recommendation 75 on new monitoring and research programs for early warning and prevention of the deleterious effects of different pollutants)
- *a key part of the recommendation was not implemented* (e.g. the commitment to the complete elimination by 1975 of deliberate pollution by oil from ships in Recommendation 56 e)
- *work was initiated but not pursued* (e.g. the assessment of the relative costs and benefits of synthetic versus natural products in Recommendations 54 and 105 a)
- *significant but largely unsuccessful efforts were made and continue* (e.g. the commitment in Recommendation 20 d to find ways of giving new value and stability to the prices for raw materials from developing countries)
- *some modest but inadequate efforts were made* (e.g. the requirement in Recommendation 3 to consult neighbouring countries on projects that may have significant transboundary environmental effects and the call in Recommendation 105 for new studies and means for making environmentally sound technology more accessible and affordable for developing countries)

At least 15-20 Stockholm recommendations were not implemented at all because

- *specific requirements were set but not met* (e.g. the ten year moratorium on commercial whaling specified in Recommendation 33)
- *the recommendation was ignored by the relevant agencies* (e.g. Recommendation 105 calling on the GATT and UNCTAD to monitor, assess and report regularly on the emergence of environment related tariff and non-tariff barriers to trade)
- *the agreed priority was not respected by governments* (e.g. bilateral aid agencies did not give high priority to requests for assistance on human settlements planning as called for in Recommendation 1 a)
- *governments failed or refused to provide the necessary information* (e.g. for the register of releases to the biosphere of significant quantities of radioactive materials in Recommendation 75 a)

The Stockholm Action Plan gave little or no prominence to several key issues which emerged as major regional and global environmental concerns during the 1970's (e.g. acid rain, desertification, climate change) UNEP therefore launched or sponsored major efforts on some of those new issues. UNEP also tackled other issues in the Stockholm Action Plan but with a much higher priority or a significantly different approach than originally prescribed. Examples include

- the Outer Limits program, especially the work on climate impact studies, atmospheric CO₂ build-up and the assessment of risks to the ozone layer
- the Regional Seas Program which was and is largely still regarded as the most

successful UNEP program

- the 1977 Conference and World Plan of Action to Combat Desertification
- the joint UNEP ILO and WHO work and international agreements on the environmental conditions occupational safety and health of workers
- the studies and convention on long-range transboundary air pollution based on the extensive initial work by OECD which was extended and consolidated in the 1979 convention by the ECE with UNEP assistance
- the 1980 World Conservation Strategy developed largely by IUCN with the assistance of UNEP and the WWF

When governments made their own 10th anniversary review of the implementation of the Stockholm Action Plan they concluded that

the Action Plan has only been partially implemented and the results cannot be considered satisfactory due mainly to inadequate foresight and understanding of the long-term benefits of environmental protection to inadequate coordination of approaches and efforts and to unavailability and inequitable distribution of resources. For these reasons the Action Plan has not had sufficient impact on the international community as a whole.¹⁵

Nevertheless the Stockholm Action Plan was clearly a remarkable achievement at the time. It set a new agenda and common policy framework for dealing with the first generation of national and international environmental problems. It led directly to many new initiatives and environmental measures at the national level. Within a few years the majority of countries had established new environmental policies, programs and agencies. It also led to new international conventions on, for example, the world's natural heritage, the protection of endangered species and the conservation of migratory species.

However, many recommendations in the Stockholm Action Plan failed to make a significant difference over the following ten years simply because they were too general or vague. The same mistake should not be repeated at the Rio Conference. The UNCED Secretary-General's insistence on specific commitments and targets for Agenda 21 should be strongly supported.

Assessment of the First Ten Years

The main conclusions of the Ågesta Group assessment of the first decade of international environmental action are summarized below:

- The Stockholm Conference and first decade marked a truly historic change in our understanding and attitudes about the inescapable interdependence of life and nations

¹⁵ *Nairobi Declaration 1982*. Report of the Governing Council at its Session of a Special Character document UNEP/GC(SSC)/4, p.53.

on our small planet

- Significant advances were made in scientific knowledge and understanding of the causes and consequences of major resource and environmental problems
- Governments and international organizations were far less successful in converting that new knowledge into new environmental policies and action plans. They were even less successful in transforming those plans into effective national and international action
- The assessment of environmental conditions and trends continued to be constrained by major gaps and a still modest capability for monitoring, collecting and combining international environmental data. Without authoritative overviews and assessments, the basis for strengthening national environmental policies and regional and global programs remained limited
- The implementation of the Stockholm Action Plan was generally too slow and incomplete. By the late 1970's the Action Plan had already been largely superseded by new environmental problems, priorities and programs
- The UNEP Governing Council failed to establish itself as an authoritative inter-governmental body providing, as specified in its mandate, "general policy guidance for the direction and coordination of environmental programmes within the United Nations system"¹⁶. Increasingly preoccupied with Environmental Fund Management instead of environmental management, one consequence and probable cause was a decline in the number of environment Ministers, policy advisers and experts in many national delegations, especially those from developing countries. At the 1981 Governing Council session most delegations were headed by diplomats. Less than a fifth of the delegates were senior environmental policy-makers or advisers
- The UN organizations and specialized agencies failed to give high priority to building environment into their own programs and budgets. In the early 1980's they still depended largely on UNEP funds for financing their environmental activities. In 1980 more than a third (\$118 million) of the total UNEP fund was committed to assisting over 20 UN organizations and agencies. Half of those funds went to only three UN agencies (UNESCO, WHO and FAO) whose own budgets were among the largest in the UN
- Cooperation with NGO's declined during the decade. Although the participation of a large number of NGO's had been a unique and innovative feature of the Stockholm Conference and initial follow-up, by the end of the first decade only 10% of the UNEP fund was allocated for projects carried out by NGO's. Most of those funds went to only 5 organizations - IUCN, ICIPE, CEFIGRE, ALECSO and IIED
- By 1980 contributions to the UNEP fund stagnated and even began to decline. Some

¹⁶ *Institutional and financial arrangements for international environmental cooperation*, UN General Assembly Resolution 2997 (XXVII) of 15 December 1972, Part I, para. 2 (b).

developed countries then launched a chicken-and-egg argument that the UNEP program was too ambitious in relation to available financial resources while many developing countries insisted more funds be provided to implement an expanded program. This situation and argument persisted through most of the 1980's.

The most unusual feature of the first decade was that environmental awareness and support generally increased within most countries yet declined at the international level. The following statement by a Stockholm veteran reflects the views of many others who replied to the Agesta Group survey:

There still exists a universal complacency about the state of the global environment. Further, I do not detect an increased political willingness on the part of most governments to address the continuing trend of environmental degradation. In fact, I believe the political will was stronger perhaps at the time of the Stockholm Conference.¹⁷

The Agesta Group report concluded:

"Overall, the record for the first decade is a generally unsatisfying combination of some significant achievements and major disappointments. To be realistic and fair, the hopes and expectations at the beginning of the decade were too high. To be frank as well, the achievements by the end of the decade were far too few.

The report ended with the sharp yet pertinent note "that the governments of the United Nations will spend in 1982 more money on armies and arms in a mere six hours than they provided over ten years to implement the United Nations Environment Programme."¹⁸

The Second Decade After Stockholm: 1982-92

By the early 1980's a remarkable series of new reports emerged which together expanded global perspectives, documented growing interdependence and helped push environmental issues higher up the international agenda. These included the OECD *Interfutures* report, the *Global 2000* report to the US President, the Okita Report to the Japanese government on *Basic Directions in Coping with Global Environmental Issues*, the IUCN *World Conservation Strategy*, the Brandt Commission report on *North-South: A Programme for Survival*, the report by the Royal Swedish Academy of Sciences on *Environmental Research and Management Priorities for the 1980's* and the OECD report on *Ecological and Economic Interdependence*.

By the early 1980's a new generation of environmental policy makers had also emerged, especially in developing countries where over 90 nations had established new Ministries or special environmental units. Just as the Stockholm Conference had mobilized the first generation of policy makers, experts and NGO's on key global

¹⁷ Op cit., Part B, p.16

¹⁸ Op cit., p. 19.

environmental issues the 10th anniversary in 1982 provided a unique opportunity to galvanize the new generation of leaders on the new generation of international environmental issues highlighted in the new global reports

To mark the 10th anniversary of the Stockholm Conference the UN General Assembly authorized the convening of a Special Session of the UNEP Governing Council in Nairobi in May 1982. With participation open to all countries, a special agenda and series of overview reports were prepared, including the first comprehensive report on the world's environment.¹⁹ Facing many new environmental and world development challenges, the 10th anniversary and UNEP Special Session became the time and place "to establish a new sense of direction and priorities for the United Nations Environment Programme" and to "initiate a new process of international consultation and cooperation which will re-engage the interest and attract the support of individuals and governments around the world."²⁰

That opportunity was unfortunately squandered. At the 1982 Special Session many governments found it more convenient to look back at the first decade than to engage in the more complex task of setting a new agenda and priorities for the second decade. Apart from a few standard invocations, no genuinely new political commitments were made. Despite the declaration²¹ that the "world community of States solemnly reaffirms its support for strengthening the United Nations Environment Programme" the UNEP program remained largely unchanged. Despite their call "for increased resources to be made available" only a few countries increased their pledges to the Environment Fund. Total UNEP funding continued to decline.

Having clung to the standard environmental agenda instead of developing new perspectives and priorities for the 1980's the UNEP Special Session at least initiated a process that would. Building on a proposal launched the previous year by Canadian Representative Geoff Bruce, the Special Session agreed to form a special commission "to assist the world community in better defining long-term environmental strategies for achieving sustainable development to the year 2000 and beyond."²²

The more detailed recommendation approved in 1983 by the UN General Assembly²³ led to a linked, two-track approach: the creation of the independent world commission chaired by Norwegian Prime Minister Gro Harlem Brundtland and the preparation of a related intergovernmental report through UNEP on the *Environmental Perspective to the Year 2000 and Beyond*.

¹⁹ Holdgate, Kassas and White, eds., *The World Environment, 1972-82*. Tycooly International Publishing Ltd., Dublin, 1982.

²⁰ The Ågesta Group Report, Part B, p.16

²¹ *Nairobi Declaration 1982*, p.53.

²² *Report of the Governing Council at its Session of a Special Character*, Resolution II, document UNEP/GC(SSC)/4, p.45.

²³ *General Assembly Resolution 38/161* of December 19, 1983.

Setting the New Environment and Development Agenda

When spelling out its new mandate for change²⁴ the Brundtland Commission made an early and fundamental decision to abandon the standard environment agenda

Focussed primarily on environmental pollution, natural resources and human settlements issues, the standard agenda dominated the first decade of environmental action. Although it led to some significant achievements in monitoring, raising public awareness and new policy and institutional initiatives, the standard agenda had several serious limitations

First it focussed largely on environmental problems already caused by development on the effects of environmental pollution rather than the sources and on the repair rather than prevention of damage (e.g. on restoration, retrofitting, reclamation, reforestation, regeneration and rehabilitation). Secondly, key linkages to economic development imperatives were neglected because it defined the main issues in largely ecological terms. Thirdly, because the standard agenda and new environment Ministries and laws were largely treated as separate and additional, the policies of major economic and sectoral agencies remained unchanged even though many had significant environmental impacts

The Brundtland Commission therefore set a new environment and development agenda which was policy-centred instead of effects-centred and emphasized the prevention rather than repair of damage to human health and the environment

The Commission's alternative agenda focussed on the following eight key policy areas: Population, environment and sustainable development; Energy, environment and development; Industry, environment and development; Food security, agriculture, forestry, environment and development; Human settlements, environment and development; International economic relations, environment and development; Decision support systems for environmental management, and International cooperation

The Commission's new environment and development agenda and approach had four main advantages

First, it concentrated attention and resources on the development goals and issues of greatest concern to most people and governments (e.g. water, food, housing, services, energy, industry, etc.)

Secondly, it reached and engaged a much wider and critical audience, the key decision-makers in the public and private sector who had the greatest influence on economic and social development at the national and international levels

Thirdly, it opened up new possibilities for preventive and cost-effective strategies using a wider and more flexible range of economic as well as regulatory instruments

²⁴ *Mandate for Change: Key Issues, Strategy and Workplan*. World Commission on Environment and Development, Geneva, 1985.

Fourthly it provided a new and more effective basis for strengthening international cooperation and institutions and influencing their policies and programs in support of development that was both economically and ecologically sustainable

This crucial shift from the standard agenda to a new environment and development agenda was an early and lasting achievement of the Brundtland Commission. Having fundamentally changed the focus for analysis and action the Brundtland Commission then proceeded to change the way international work and studies were carried out. It provided a practical demonstration of the advantages of "thinking globally and acting locally"

Creating an Open Process and Global Forum

The Brundtland Commission made an early commitment to function as an independent commission of inquiry and global forum with an innovative and open process. The members were equally determined to reach beyond the traditional environment community to the many other decision-makers and experts in government and industry whose understanding and cooperation was needed for moving towards sustainable development.

The intensive 30-month working life of the Brundtland Commission had four distinct phases: defining the key issues, strategy and workplan (late 1984); fact finding (1985 to mid-86); the preparation and testing of the draft report (late 1986); and the finalization and presentation of the report (early 1987). During that time the Commission

- Had meetings, visited relevant projects, held public hearings and met with heads of government, Ministers, parliamentary and legislative committees and senior executives in government, industry and NGO's in over 15 cities in 8 countries in Africa, Asia, Europe, Latin America and North America
- Established special interdisciplinary Advisory Panels of top world experts from government, industry and NGO's which prepared detailed analyses and recommendations on *Energy: A Global Strategy for Sustainable Development*, *Food: Global Policies for Sustainable Agriculture*, and *Industry: Strategies for Sustainable Industrial Development*. These reports were circulated in mid-1986 for public review and comment.
- Convened a group of international legal experts who prepared and published a detailed and innovative report on *Legal Principles for Environmental Protection and Sustainable Development*
- Engaged other experts, research institutes and international organizations around the world to prepare more than 75 specialized studies
- Held discussions with the heads of virtually all major UN agencies and other global and regional intergovernmental organizations and through different Commission

members addressed many national and international conferences around the world

The Commission's many public hearings were unique and unprecedented. They gave hundreds of organizations and individuals throughout the developed and developing world an opportunity to present and discuss their views openly and directly. They provided Commission members with first-hand accounts and new insights on many large and smaller problems of unsustainable development. Altogether the Commission received over 500 written submissions constituting over 10,000 pages of material.

No other international body or world commission has ever consistently used such innovative approaches as joint government/industry/NGO experts groups linked directly to the decision-making process, the public release of preliminary findings and reports for comment, or the convening of open public hearings for getting and testing new ideas and approaches. Moreover, and it is not a coincidence, none before or since the Brundtland Commission have had the same global and local impact during such a short time and, more importantly, for such a long time.

After Rio, to assess and help accelerate progress made and needed in implementing key parts of Agenda 21, more extensive use should be made of independent fact-finding bodies, mini-Commissions and task forces using similar open decision-making processes and public hearings as pioneered by the Brundtland Commission.

The Commission's final report was launched in April 1987 to wide acclaim around the world. Zimbabwe President Robert Mugabe welcomed it as "a breath of fresh air in a world polluted by poverty, hunger, disease, racism, industrial waste and the threat of nuclear annihilation." The *Washington Post* described it "one of the most ambitious and unusual programs ever devised for halting the deterioration of the world environment." *The Guardian* gleefully noted that "the ideas that underpin its analysis are only a little short of heretical and subversive" and then pinpointed the challenge ahead. "In arguing that development must submit to the test of ecological sustainability it is making a crucial point which is still rejected or deliberately evaded in some of the corridors and boardrooms of politics and business, or simply not understood."²⁵

UNEP in the 1980's

UNEP was designed from the outset to function primarily as a catalyst, stimulating and coordinating new environmental action within and outside the UN system. By definition a catalyst is a "substance that, without itself undergoing change, aids a chemical change in other substances" (OED). During the 1980's neither the main thrusts of UNEP's programs or overall funding changed significantly. UNEP ended its first decade and started its second decade with a program that still largely reflected the standard approach. And it ended the 1980's with nearly the same number of staff and annual

²⁵ This and the preceding quotes are from "What they said about Our Common Future", compiled and produced by the Centre for Our Common Future, Geneva, 1987.

budget as ten years earlier

UNEP nevertheless established a solid record of achievements during the 1980s.

Highlights include

Earthwatch

- The expansion of the Global Environmental Monitoring System to 142 countries
- The establishment of the Global Resource Information Database (GRID) in Geneva with regional nodes in Geneva, Nairobi and Bangkok, which uses geographic information systems (GIS) and satellite image processing technology to present environmental data and analyses on maps and print-outs
- The creation within GEMS of linked climate monitoring networks the World Glacier Monitoring Service with UNESCO and the Background Air Pollution Monitoring Network plus the Global Ozone Observing System with WMO
- The extension of the INFOTERRA network to include 6,500 institutions and handle over 17,000 inquiries annually
- The expansion of the International Register of Potentially Toxic Chemicals (IRPTC) to include detailed profiles on the health and environmental effects of over 800 chemicals and national regulations covering over 5,000 substances

Land, water, forests and wildlife resources

- The 1982 World Soils Policy and Action plan prepared in cooperation with FAO and UNESCO
- The Tropical Forest Action Plan developed jointly with FAO, World Bank, UNDP and World Resources Institute
- The comprehensive 1987 action plan for the coordinated monitoring, assessment and management of environmental problems by the eight States sharing the Zambezi river basin
- The UNESCO-UNEP global network of over 285 biosphere reserves in 72 countries

Environmental guidelines and laws

- The development of principles and guidelines on offshore mining and drilling (1982), on marine pollution from land-based sources (1985) and on environmental impact assessment (1987)
- The 1983 Convention on the Conservation of Migratory Species of Wild Animals which provides a framework for coordinated research, protecting habitats and controlling hunting
- The 1985 Vienna Convention for the Protection of the Ozone Layer

- The 1987 Montreal Protocol committing parties to an eventual halving of their 1985 consumption and production of CFC's and freezing their consumption and production of halons
- The 1987 Cairo guidelines on the environmentally-sound management of hazardous wastes and 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal
- The 1989 amended London Guidelines for the Exchange of Information on Chemicals in International Trade including a procedure for prior informed consent
- The 1990 London agreement to phase out CFC's halons and carbon tetrachloride by the year 2000 and methyl chloroform by 2005 plus the establishment of the world's first global fund to help developing countries adopt environmentally friendly technology

Other achievements

- The World Climate Impact Studies Programme the 1985 Villach Climate Conference organized jointly with WMO and ICSU and subsequent regional meetings in Africa Asia and Latin America, and the establishment with WMO of the crucial International Panel on Climate Change
- The rapid and global extension of the Regional Seas program with new action plans for protecting the marine environment in the Kuwait region, the Red Sea, the Atlantic coast of West and Central Africa, the Eastern Africa seaboard, the Pacific coast of South America, the islands of the South Pacific, the East Asian region and the South Asian Seas
- The 1982 creation and expansion of the UNEP Clearing House to help developing countries mobilize resources for preparing and implementing environmental projects and national action plans
- The 1984 World Industry Conference on Environmental Management convened in cooperation with the International Chamber of Commerce
- The preparation with UNESCO of the 1987 International Strategy for Action in the Field of Environmental Education and Training and, through the joint International Environmental Education Programme, the training of over 12,000 teachers and teacher trainers

These notable UNEP achievements were largely accomplished in the context of the standard agenda. On the new environment and development agenda, apart from the major 1987 *Environmental Perspective to the Year 2000 and Beyond* report,²⁶ UNEP's record is modest. For example, UNEP's capacity to assess the economic impacts of environmental policies and measures remained limited. As Dr. Tolba pointed out "UNEP

²⁶ *Environmental Perspective to the Year 2000 and Beyond*, UNEP, Nairobi, 1987.

has played a key role in getting the science right and aligning it with political commitment. But we still have very far to go on getting the economics right.²⁷

On the integration of environment into the policies, programs and budgets of the major economic and sectoral agencies at the national and international level - the main thrust and recommendation of the Brundtland Commission report - a few reports and inter-agency discussions were initiated but little effective action taken.

A major and innovative exception was the UNEP initiated and UNDP/World Bank funded project in the Seychelles. In the initial phase started in late-1989, the Seychelles Planning Ministry and the Environment Department jointly led an intensive inter-Ministerial process which resulted in environment being built into every major sector and chapter of the Seychelles National Development Plan for 1990-94. In the second phase a complementary Environmental Management Plan and Investment Programme for 1990-2000 was prepared and presented by the President to the people of the Seychelles on June 5th, World Environment Day 1990. The Seychelles is the first and to date the only country to fully integrate environment and development with a comprehensive environmental management plan which is an integral part *and* operational extension of their national development plan.²⁸

On the integration of environment in UN agencies programs, the UNEP led System-Wide Medium Term Environment Plan (SWMTEP) after a decade of gradual improvements still remained primarily a compilation of UN projects rather than a comprehensive UN system-wide strategy for environmental protection and improvement. Many SWMTEP projects are additional to rather than an integral and strategic part of programs and budgets of many UN agencies.

Nevertheless, UNEP deserves special credit for its achievements during the 1980's as they were accomplished without any significant increases in staff or budget. From the day it started, UNEP's financial health depended on a small number of countries. As shown in the chart, 97% of the total contributions during UNEP's first five years came from only nine OECD countries plus the USSR. In the late 1980's it was 76%, but the difference caused in part by reductions in the annual contributions by key donors.

For example, during the 1980's Canada's contributions to UNEP were nearly 20% less than its 1972 pledge in Stockholm, and that figure does not take inflation into account. From 1973 to 1987 Canadians contributed on average 3¢ a year to UNEP on a per capita basis. The four Nordic countries with a total population about the same as Canada together contributed nearly four times as much. On a per capita basis Swedes contributed seven times as much as Canadians. But at 3¢ or 21¢ each per year, given the many achievements of UNEP over those fifteen years, we all got good value for our pennies.

²⁷ *Priority Evolving Environmental Issues: Report of the Executive Director*, document UNEP/GCSS.11/2, para. 19.

²⁸ *Seychelles National Development Plan, 1990-94, and Environmental Management Plan and Investment Programme, 1990-2000*. Government of Seychelles, Victoria, 1990.

Top Ten Contributors to the Environment Fund

	1973-77		1977-82		1983-87		1973-87		Per-cap
	\$m	EF %	\$m	EF %	\$m	EF %	\$m	EF %	
1 USA	43.0	44%	47.8	31%	30.0	20%	120.8	30%	3c
2 Japan	10.0	10%	17.9	12%	20.5	14%	48.4	12%	3c
3 USSR	10.5	11%	19.1	12%	17.7	12%	47.3	12%	1c
4 Germany (FR)	8.1	8%	11.0	7%	9.7	7%	28.8	7%	3c
5 Sweden	5.0	5%	10.0	7%	11.3	8%	26.3	7%	21c
6 France	6.5	7%	6.4	4%	4.3	3%	17.2	4%	2c
7 UK	3.9	4%	6.0	4%	6.1	4%	16.0	4%	2c
8 Canada	5.0	5%	4.2	3%	4.2	3%	13.4	3%	3c
9 Norway	2.2	2%	4.3	3%	4.4	3%	10.9	3%	17c
10 Switzerland	1.2	1%	2.7	2%	2.7	2%	6.6	2%	7c
Total	95.4	97%	129.4	85%	110.9	75%	335.7	84%	5c
Total EF \$	98.7	100%	153.7	100%	148.3	100%	400.7	100%	-

Notes: All financial figures are US \$ millions. The final column shows US cents per capita per year. Source: UNEP.

Total contributions to UNEP actually regressed by 1990, virtually turning the clock back two decades to the Stockholm Conference. Dr. Tolba recently reminded governments that the 1972 fund target was \$20 million per year. He then pointed out that if "average inflation over that period is considered at an annual rate of only 5 per cent, the contributions actually paid in 1990 were equivalent to only \$22.5 million in the prices of 1972 when UNEP was established."²⁹ By 1990 the number of countries contributing to the Environment Fund had also declined.

In sum, it is remarkable that UNEP managed to achieve so much with so few funds during the two decades after the Stockholm Conference. That UNEP did not achieve more with respect to the other UN agencies should not be surprising. The numbers, frankly, were against UNEP. During its first 15 years UNEP received total contributions of \$400 million, a sum less than half the total *annual* budgets of only three of its main partners - WHO, FAO and UNESCO. On an annual basis the ratio was more than 25 to 1.

Success in strengthening UNEP and UN cooperation on environmental protection and

²⁹ *The Role of UNEP in the 1990's: Report of the Executive Director*, document UNEP/GC.16/4/Add.5, para. 7.

sustainable development will depend on making significant changes either in the funding ratio or in the structure of the UN system and preferably both

The Next Seven Months

The road to Rio is already so extensively signposted for so many different destinations that it's difficult to know where to turn one's attention.

But of all the key problems and issues on the agenda for the UNCED preparatory negotiations, one of the most sensitive and least discussed areas is the institutional and legal arrangements *after* the Rio Conference. Those issues therefore warrant special attention during the remaining seven months *before* the Rio Conference.

Three major concerns are briefly examined in this concluding chapter: proposals for strengthening UNEP; restructuring the UN system; and avoiding environmental conflicts. The report ends with a special note on Canada and the USA in the preparations for Rio.

Proposals for Strengthening UNEP

Over the last few years there have been extensive discussions within and outside the UNEP Governing Council on how best to strengthen UNEP. Many new and innovative proposals have been put forward with varying degrees of support.

In May 1991 the UNEP Governing Council approved the following measures to strengthen UNEP³⁰

- To improve UNEP's financial and administrative efficiency, management and organization following an initial study to be completed in early 1992 by an internationally recognized consultancy firm plus a second phase study to be carried out after the 1992 UNCED Conference and submitted to the UNEP Governing Council session in 1993 (GC.16/6);
- To increase the capacity to assess and respond to man-made environmental emergencies by establishing within UNEP a new centre for urgent environmental assistance on a trial basis for 1992-93 (GC.16/9);
- To give GRID, the Industry and Environment Office and the Environmental Law and Institutions Unit greater autonomy in fulfilling their functions by upgrading them to new UNEP Programme Activity Centres (GC.16/25);
- To create a new capability for assessing and promoting the transfer of environmentally sound technologies by establishing under UNEP an International

³⁰ *Proceedings of the Governing Council at its Sixteenth Session*, document UNEP/GC.16/27.

Environmental Technology Centre (GC 15-34)

- To secure \$100 million in annual contributions to the Environment Fund in 1992 (GC 15-44)

Many other proposals for strengthening UNEP and UN inter-agency cooperation have been made in the Brundtland report, UN General Assembly ECOSOC, the UNEP Governing Council, the UNCED global and regional preparatory meetings and other important fora. Proposals supported by more than a few countries are briefly noted below by main category.

UNEP Governing Council

- To expand geographic participation in the decision making of the UNEP Governing Council by increasing its membership from 58 to at least 87 members.
- To improve policy dialogue and coordination by selecting a priority theme or policy sector (e.g. sustainable energy production, sustainable cities) for detailed review at each UNEP Governing Council session and involving other relevant Ministers and Bureau members and heads of international organizations in those discussions.

UN coordination and cooperation

- To get greater integration of environment and development throughout the UN system by establishing an Environment and Development Coordination Board consisting of the executive heads of UN organizations and agencies chaired jointly by the heads of UNEP and UNDP and meeting biannually and alternately in Nairobi and New York.
- To accelerate the integration of environment and development by convening biennial joint meetings of the Governing Councils of UNEP and UNDP alternating between Geneva and Nairobi.
- To ensure that all UN programmes and projects support sustainable development by giving UNEP the lead responsibility for helping prepare and apply common environmental impact assessment criteria, guidelines, methodologies and procedures throughout the UN system.

Environmental assessment

- To strengthen international environmental research and training and authoritative scientific assessments and reporting on the state of the environment and trends by establishing through UNEP an independent World Environment Academy consisting of top scientists in the many different disciplines relevant to sustainable development.

Environmental law

- To accelerate the implementation of international environmental law by giving UNEP the responsibility to monitor, verify and report annually on the effectiveness, enforcement and compliance with relevant regional and global conventions
- To help avoid and resolve international environmental disputes and reduce their actual or potential harm to human health, economies and ecosystems by increasing UNEP's role and capacity to provide fact-finding, conciliation and mediation services for facilitating peaceful and timely solutions.

NGO participation

- To expand the links with and participation of NGOs by creating new modalities and mechanisms, based on the experience and results of NGO coalition building for the 1990 Bergen Conference and 1992 Rio Conference, for the more direct involvement of NGO representatives in UNEP sponsored global, regional, national and inter-agency environmental meetings, programs and projects

Institutional arrangements

- To strengthen and expand regional programmes in support of sustainable development by combining in a joint regional office the UNEP regional staff and programs with the relevant units of the Regional Economic Commissions in Africa, Asia, Latin America and West Asia;
- To increase the effectiveness of UN efforts to combat desertification in Africa by transferring the headquarters of the Sudano-Sahelian Office to Africa and strengthening its links to UNEP and UNDP;
- To consolidate UN activities on natural resources management by transferring the mandate, budget and staff of the UN Committee and Centre for Natural Resources to UNEP in Nairobi;
- To increase UNEP's authority and administrative autonomy in the UN system by giving it the status and powers of a specialized agency, including the function and capacity to serve as a UNDP executing agency

UNEP funding

- To increase Environment Fund contributions to at least \$250 million annually by 1995.

While some of these proposals can be judged on their own merits, most should now only be considered in the context of the evolving UNCED discussions and negotiations. The central concern of the Rio Conference is not how best to strengthen the environment work in the UN system but how best to improve the environment and development performance of the world community. A chief obstacle to progress over the last two

decades has been the lack of cooperation and integration among the principal institutions in national governments and within the UN system

Restructuring the UN system

Following the Stockholm Conference closer coordination and cooperation in the UN system was to be achieved through the new Environmental Coordination Board (ECB) consisting of the executive heads of relevant UN organizations and specialized agencies who would periodically meet under the Chairmanship of the UNEP Executive Director

However the ECB never functioned effectively. In spite of the resolve of governments and the General Assembly, the ECB was largely ignored by the executive heads of many UN agencies. In 1977 the ECB was abolished and its functions simply added to those of the Administrative Committee on Coordination (ACC)

UNEP has tried through many other innovative ways to encourage greater inter-agency coordination and cooperation including, for example, a new inter-agency group of Designated Officials on Environmental Matters (DOEM), the innovative System-Wide Medium-Term Environment Programme (SWMTEP) with greater thematic joint programming, the development of regional environment conventions, action plans and ad hoc coordination mechanisms; the Global Environmental Monitoring System (GEMS) and other monitoring and information systems such as GRID, the IRPTC and INFOTEPRA and, even reaching outside the UN system to major international financial institutions and bilateral agencies, the Committee of International Development Institutions on Environment (CIDIE)

Despite UNEP's persistent efforts over nearly two decades we still do not have a UN system-wide environment strategy and programme that is greater than the sum of the parts. Moreover, some key parts are weak or missing (e.g. energy, transportation). With a few exceptions like WHO and WMO other UN agencies have largely failed to make the commitments that were expected at and after Stockholm

The UNEP Executive Director reported in 1990 that contributions by other organizations to Environment Fund projects were estimated at four times the contributions by the Fund itself. "Even so," he concluded

"the agencies and bodies within the United Nations system have continued to rely on contributions from the Environment Fund to implement many of their environmental activities. Recent financial constraints in a number of agencies have reinforced this dependence although the World Commission on Environment and Development recommended that agencies should assume direct financial responsibility for their longer-term environmental activities." 31

Who should be held accountable for this situation? Is it UNEP although it has certainly tried many different ways of fulfilling this key part of its mandate? Or the UN agencies

31 *Priority Evolving Environmental Issues*, document UNEP/GCSS.II/2, para. 133.

who resisted efforts to make environment a priority in their programs and budgets and to strengthen inter-agency cooperation? Or should it be governments for failing to ensure that the decisions they make in the General Assembly are then reflected and fully respected in the programmes and budgets of the UN agencies?

Today nearly 20 years after the Stockholm Conference while there have been some improvements in some areas, the present state of UN inter-agency cooperation generally and on environment in particular is less than what was aimed at. Moreover, it is certainly far less than what will be needed to implement the UNCED Agenda 21.

We must now ask ourselves if the possibilities of reforming the present institutional structure and inter-agency relations in the UN system haven't already been largely exhausted. With ECOSOC, the CPC, ACABQ, ACC, DOEM, ISGWR, ECG and IAGWR plus still many others, don't we already have enough formal as well as many other ad hoc UN mechanisms for coordination? What practical results are these bodies really achieving today? Are they making a significant difference to project delivery in developing countries where results are most needed? And, most importantly, what practical results are we likely to achieve by adding even more?

One alternative to reforming or adding more committees to this already large UN coordination machinery is simply to provide UNEP with far greater and more secure financial resources for developing and implementing a truly UN system-wide strategy and programme. That is, we recognize the reality of the last two decades - that progress has largely depended on the ability of UNEP to buy the cooperation of the UN agencies - and simply give UNEP far more funds for doing so on a much greater scale.

But we can also change the overall structure and rules for the UN system in order to make far more effective and *combined* use of *all* UN staff and financial resources in support of sustainable development. The present UN institutional and inter-agency arrangements were largely set in the first half of the 20th century. Today, two decades after Stockholm and nearly half a century after San Francisco, there is now an urgent need for fundamental rethinking and reorientation towards as the Brundtland Commission asserted, "new forms of cooperation that can break out of existing patterns and influence policies and events in the direction of needed change."

This necessary and much larger process of change will take years. But we must at least recognize the need and launch the process of UN renewal in the negotiations before and at the Rio Conference.

Avoiding environmental conflicts

On environmental law the Brundtland Commission made the following blunt observation:

National and international law has traditionally lagged behind events. Today, legal regimes are being rapidly outdistanced by the accelerating pace and expanding scale

of impacts on the environmental base of development.³²

The Brundtland Commission also emphasized that:

Individuals and states are more reluctant to act in a way that might lead to a dispute when, as in many national legal systems, there is an established and effective capacity as well as ultimately binding procedures for settling disputes. Such a capacity and procedures are largely lacking at the international level, particularly on environmental and natural resource management issues.³³

Both statements are unfortunately still true today, only more so. In the last four years, no significant steps have been taken to strengthen international legal institutions or procedures in support of environmental protection and sustainable development. The gap has clearly widened. Moreover, as UNEP Executive Director Mustafa Tolba recently reported to governments, the number and the range of environmental conflicts has increased.³⁴

This raises several fundamental questions:

- What would happen in Canada if our laws could be ignored by those few citizens who did not support them?
- What would happen if anyone could commit any act, however illegal or harmful to their neighbours, so long as it was done within the boundaries of their own property?
- What would happen if those committing illegal acts had to agree before they could be prosecuted?

With such rules, no community, no society and no nation would ever achieve and maintain peace, order and good government. Yet when one strips away the complicated legal language used in our international conventions, these are the rules which prevail today for our community of nations.

With accelerating interdependence among peoples and countries and growing regional and global environmental threats, can we really afford to maintain these rules and stand by when the environment, the economy and public health in one or most States are put at serious risk by the actions or inaction of one or a few States? If we do not change these rules, will larger States simply ignore legitimate complaints from their smaller neighbours about pollution or the equitable use of a shared natural resource? Or, in the opposite situation, will larger States feel compelled by public pressure to use their greater economic and even military muscle against smaller States which seriously pollute or deplete shared natural resources?

These are not fanciful or remote possibilities. In Africa, for example, the livelihoods

³² *Our Common Future*, p. 330.

³³ *Ibid.*, p. 334.

³⁴ *Environment in the 1990's: Challenges and Demands*, Introductory Report of the Executive Director, UNEP/GC.16/4, para. 46.

and lives of most peoples and the health and economies of most nations depend on adequate access to clean water. Nearly every African country shares one or more of the over 55 international river basins. Most are without any international agreement on equitable use. Only a few have effective institutional arrangements for consultation or cooperation. Some countries, such as Egypt and Ethiopia, are already engaged in serious disputes over water.

- How many innocent people must suffer or even die from the effects of contaminated water, too little water or armed conflicts over water before we put in place effective mechanisms for resolving international environmental conflicts?
- Can we have any doubt that change is inevitable that we must eventually move beyond the narrow and increasingly dangerous constraints of national sovereignty doctrines if we are to protect the common interests and future of all peoples and States?
- If we agree that such change must eventually happen sooner or later, why suffer the increasing economic, environmental and health costs of further delay? Can we have any doubts that the sooner our international rules and legal institutions are strengthened the better it will be for everyone?

We may personally have no doubts but governments clearly do. This is in part because the issue never gets a fair hearing. Once one government waves the red flag of national sovereignty, others snort indignantly and keep charging until someone inevitably suggests to popular acclaim to move on to another topic.

Yet even the Brundtland Commission questioned

"not just the desirability but even the feasibility of maintaining an international system that cannot prevent one or several States from damaging the ecological basis for development and even the prospects for survival of any other or even all other States." 35

This issue clearly needs a new champion with a new and more constructive approach built around the following points:

- States and individuals should have the right *not* to suffer significant damage to their health or environment caused by activities in or by another State.
- This right is now *an essential attribute and enhancement* of national sovereignty because the first duty of any State is to protect the security of its citizens.
- That right has a reciprocal obligation not to pollute others. Acceptance of that obligation is a *responsible exercise of national sovereignty* rather than a diminishment of it.
- States and individuals should have access to *timely legal remedies* for stopping or modifying activities which threaten or cause damage to their health or environment.

35 Op. cit., page 313.

(e.g. as a peaceful alternative to economic sanctions or armed force)

- States and individuals should be compensated for significant damage to their health or environment caused by activities in or by another State
- The most important and beneficial function of binding dispute settlement procedures are to *avoid* environmental conflicts. Once in place the majority of States will adapt their behaviour to ensure binding procedures are not invoked
- New binding procedures provide an *incentive to negotiate* and settle problems quickly. At present a polluting State has no such incentive for starting or concluding any negotiations

The success or failure of the Rio Conference will not be determined on the basis of a single issue. After Rio, however, the implementation of Agenda 21 and of the climate, biological diversity and other environmental conventions will be compromised until new and ultimately binding dispute settlement procedures are put in place.

Canada and the USA on the Road to Rio

In the negotiations before and at the 1972 Stockholm Conference, Canada and the USA were among the leaders in proposing and supporting new international action funds, programs and institutional arrangements on environment. That like-minded Canada-USA cooperation continued for several years afterwards.

The US first ruptured that environmental alliance in 1976 at the UN Conference on Human Settlements when their delegation deceived Canada and other OECD countries during the final vote on the Vancouver Declaration.³⁶ The illusion of shared environmental concerns and goals was further eroded during the late-1970s and early 1980s when the US refused to take any significant steps to reduce their air pollution crossing our common border. During the 1980s the gap widened between the Canadian and US positions on an increasing number of environmental issues and programs in the ECE, OECD and UNEP.

More recently, at the 1990 Bergen Conference the USA reversed its position on "new and additional financial resources" for developing countries.³⁷ The US delegation also dug in their heels on the precautionary principle, the environmental rights charter, a toxic wastes ban and CO₂ emission targets. They then leaked a State Department cable

³⁶ D. A. Turin, "Exploring Change: What Should Have Happened at Habitat" *Habitat International*, Vol. 3, No. 1/2, pp. 187-188.

³⁷ Five months earlier the USA had joined the consensus in adopting General Assembly Resolution 44/223 on "The United Nations Conference on Environment and Development". In the final preambular paragraph the resolution states "that new and additional financial resources will have to be channelled to developing countries in order to ensure their full participation in global efforts for environmental protection".

implying Canadian support.³⁵ With some difficulty the Canadian delegation eventually managed to distance itself from hardline US positions. Yet Canada still won third place - after the USA and UK - on the NGO list of Bergen. "Slowpokes" for "clinging to their reputation as an offensive country yet positioning as a defensive one hiding behind other nations backs"³⁹

The big-and-little-brother impression of Canada's international role persists even today. At the climate convention negotiations in Nairobi just two months ago the NGOs issued a "third-term class report" on the performance of various countries. The USA it reported

Continues to be a deep disappointment. While potential to contribute is greater than other classmates refusal to throw weight behind - instead of against - class effort threatens collective interests. Science and economic facts good at the theoretical level but fail in application. Claims to represent class in 1992 must be reviewed in the light of this performance"⁴⁰

Their class report for Canada concluded:

Generally an unimaginative but stable performance although science and economics could be much better. Desire to play close to the "net" (emissions) and to borrow other classmates entitlements weakened third term performance. Canada does itself no good by talking in class to its immediate neighbour"⁴¹

Today one must seriously question how much room remains for friends and honest-brokers to build new bridges, partnerships and global bargains when a top US official publicly declares in a Harvard lecture

that the label 'environmentalist' is a green mask under which different faces of politico-ideology can hide. It would be, he said a regrettable irony if just as American values have prevailed in the East-West struggle they were to be lost in what some environmentalists like to term the struggle for global management."⁴²

Are the relentless anti-environment views of a few top US officials in the present administration an accurate reflection of mainstream "American values"? Even if they were and that is doubtful, should they be allowed to dominate and possibly derail the UNCED negotiations? Should we try to achieve consensus for Rio at any price? If we don't get consensus on all issues will UNCED be judged a failure? Yet without significant changes in the attitude and views of some top US officials, the chances of getting meaningful consensus at the Rio Conference appear remote.

But we must also ask if UNCED will be considered a success if, having accommodated the minority views of one or a few governments, we end up with a fragile consensus

³⁸ *Bergen ECO*, May 10, 1990, p.1

³⁹ "Slowpokes of the Week", Naturvernforbundet Hordaland, Bergen, May 13, 1990

⁴⁰ *ECO: Climate Talks NGO Newsletter*, Nairobi, September 20, 1991.

⁴¹ *Ibid.*

⁴² Speech by Richard Darman, Director of the US Office of Management and Budget. Quoted in a page 1 article on "US Is Assailed at Geneva Talks For Backing Out of Ozone Plan" in *The New York Times*, May 10, 1990.

built around ambiguous language and measures that fall short of the commitments and targets needed to tackle our urgent environment and development problems? Will later generations judge that a success?

The day of reckoning should *not* be postponed until the Rio Conference itself. In the negotiations on both conventions and at the final UNCED PrepCom next March, agreement by consensus should remain the preferred goal but not necessarily the only outcome.

On key issues, commitments and targets where one or a few governments insist on maintaining minority positions, the UN habit of using ambiguous language to reach an artificial consensus should be abandoned. That merely obscures and postpones consideration of the real issues and, as often intended, misleads journalists and the public. Instead, at that point, Canada should support or propose roll call votes to record which and how many governments stand where.

All countries and the public will then clearly know the score. Moreover, those governments persisting with minority positions will have another two months before the Rio Conference to reflect on the available scientific and economic evidence and its implications for their national interests *and* the rapidly converging common interests of the international community.

Those few governments must also decide which of "one country, one veto" or "might is right" or the democratic principle of majority rule - especially if it is an overwhelming majority of developed and developing countries - provides the most reliable way for making fair choices and securing greater peace, stability and economic and social justice not only within but among nations.

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**PARTICIPANTS
FROM STOCKHOLM TO RIO SEMINAR
8-9 DECEMBER 1991, WILLSON HOUSE**

SEMINAR SPEAKERS

- | | |
|------------------|--|
| Maurice Strong | 1991: Secretary General of UNCED
1972: Secretary General of the 1972 UN Conference on the Human Environment at Stockholm |
| Jim MacNeill | 1991: Senior Fellow, Institute for Research in Public Policy, Ottawa
1972: Assistant Deputy Minister, Housing and Urban Affairs |
| Geoffrey Bruce | 1991: Retired Canadian Head of Post
1972: senior DEA official in charge of the preparatory process for the 1972 UN Conference on the Human Environment at Stockholm |
| David Runnalls | 1991: Fellow, Institute for Research in Public Policy, Ottawa
1972: Organizer of NGO parallel event at the 1972 UN Conference on the Human Environment at Stockholm |
| David Munro | 1991: International Union for the Conservation of Nature, Geneva
1972: Senior Env't Canada official in the preparatory process for the 1972 UN Conference on the Human Environment at Stockholm |
| Robert Munro | 1991: Independent environmental consultant, Nairobi
1972: Member of the international Secretariat for the 1972 UN Conference on the Human Environment at Stockholm |
| Victor Goldbloom | 1991: Commissioner of Official Languages
1972: Quebec Minister of Env't, member of the Canadian delegation to the 1972 UN Conference on the Human Environment at Stockholm |
| Alan Beesley | 1991: Former Special Advisor to the SSEA on the Environment and Ambassador for Marine Conservation
1972: Deputy Head and Legal Advisor of Canadian Delegation to the 1972 UN Conference on the Human Environment at Stockholm |

SEMINAR SPEAKERS, con. . .

- Terrence Bacon 1991: Retired Canadian Head of Post
1972: Deputy Legal Advisor to the Canadian Delegation to the
1972 UN Conference on the Human Environment at
Stockholm
- Lars Engfeldt 1991: Deputy Permanent Representative, Swedish Mission to
the UN, New York
1972: Liaison Officer between the Stockholm Conference
Secretariat and the Swedish Foreign Ministry
- Peter S. Thacher 1991: Senior Advisor to Maurice Strong, Secretary-General of
UNCED Senior Counsellor, World Resources Institute
1972: Staff Member of the Secretariat of the 1972 UN
Conference on the Human Environment at Stockholm
- Pierre Marc Johnson: Vice-Chair, National Roundtable on Environment and
Economy
- David MacDonald: Member of Parliament and Chair of the House of Commons
Environment Committee

OFFICIALS

External Affairs and International Trade

- John P. Bell: Special Advisor to the SSEA on the Environment
- Jeremy Kinsman: Assistant Deputy Minister, Political and International Security
Branch
- Michael Shenstone: Special Advisor to the Bureau of Policy Planning
- Serge April: Director General, Bureau of Legal Affairs, External Affairs
- Robert Hage: Director, Legal Operations Division, External Affairs
- Michael Small: Coordinator, UNCED Taskforce, External Affairs

Environment Canada

- Arthur Campeau: Special Advisor to the Minister of the Environment on
International Affairs
- Robert Slater: Assistant Deputy Minister, Policy, Environment Canada
- Fern Hurtubise: Director General, International Affairs Directorate
- G. Victor Buxton: Executive Director, National Secretariat on UNCED

OFFICIALS, con. . .

Canadian International Development Agency

Nicole Sénécal: Vice-President, Policy Branch
Barbara Brown: Policy Branch

Forestry Canada

Jag S. Maini: Assistant Deputy Minister, Forest Environment, Forestry
Canada

Department of Fisheries and Oceans

Geoffrey Holland: Assistant Deputy Minister
Bob Applebaum: Director General, International Directorate

Department of Finance

Ron Edwards: Director of Environment, Energy and Resource Division

Privy Council Office

Olivier Jalbert: Foreign and Defence Policy
David Fransen: Government Operations and Labour Relations

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AGENDA
SEMINAR: FROM STOCKHOLM TO RIO

Sunday, 8 December 1991
Willson House

10:30 **Welcoming remarks by John P. Bell, Special Advisor to the SSEA on the Environment**

10:40 **Opening Remarks by Maurice Strong, Secretary-General of UNCED**

11:00 **SESSION ONE: ROAD TO STOCKHOLM/ROAD TO RIO**

Purpose: To assess the global environmental agenda that emerged through the preparatory process leading up to the Stockholm Conference, and to compare it with the agenda emerging through the preparatory process for UNCED > .

Chair: Nicole Senécal, Vice-President, Policy Branch, CIDA

Opening Speakers: Geoffrey Bruce, Senior External Affairs official in charge of preparations for Stockholm
David Runnalls, Fellow, Institute for Research on Public Policy

Questions for Discussion:

1. How has concept for 'global conferences' on the environment arisen -- first for Stockholm and then for Rio? What are the diplomatic, political and scientific origins?
2. Are there differences in the way that Canada responded to the Stockholm initiative and the Rio? How did we organize ourselves to prepare for each? How did the provinces, the public and the media respond?
3. Have Canada's priorities for Rio changed from those at Stockholm? Are there differences in the way that they were selected, developed, and approved politically? Why did they seem to be priorities at the time?
4. How did the international preparatory process for Stockholm unfold? What were the critical moments along the way? Were the issues defined and decisions reached through the preparatory process in any way different from that so far evident for UNCED?
5. How far did the Canadian delegation succeed in meeting its objectives at Stockholm? What accounted for our successes and failures?
6. What made Stockholm a success in the eyes of its participants, the media and the public, in Canada and internationally?

12:30 Buffet lunch

14:00 SESSION TWO: THE LEGACY OF STOCKHOLM

Purpose: To evaluate the outcomes of Stockholm, and the subsequent evolution of the international agenda that lead to the decision to launch UNCED.

Chair: Dr. Jag Maini, ADM Forest Environment, Forestry Canada

Opening Speaker: Robert Munro, Environmental Consultant

Questions for Discussion:

1. In hindsight, what were the main achievements of Stockholm in terms of:
 - (a) concrete environmental measures;
 - (b) inscribing 'the environment' on the domestic agenda of governments;
 - (c) catalyzing action on 'the environment' within the U.N. system and other international institutions.

2. What were the main failures of Stockholm in terms of:
 - (a) issues unresolved;
 - (b) issues never addressed;
 - (c) initiatives that were never effectively followed up.

3. How long did the 'momentum' created by Stockholm last? Why did another global conference on the scale of Stockholm seem desirable or necessary?

4. How has the international environmental agenda changed in the twenty years since Stockholm? What are the "new issues" that have emerged; what issues have lost prominence, and why?

14:55 Break

15:00 Speaker: J. Alan Beesley, Former Special Advisor to the SSEA on the Environment and Ambassador for Marine Conservation

5. What contribution did Stockholm make to the evolution of environmental law?

6. What have we learned over the intervening twenty years about managing with environmental issues through multi-lateral diplomacy?

16:00 End of Session

16:00 SESSION THREE: PROSPECTS FOR SUCCESS AT RIO

Purpose: To evaluate our criteria for a successful outcome to UNCED and our chances of achieving one.

Chair: Arthur Campeau, Special Advisor to the Minister of the Environment on International Affairs

Opening Speaker: Maurice Strong, Secretary-General of UNCED

Respondents: Jim MacNeill, Senior Fellow, Institute for Research on Public Policy
Pierre Marc Johnson, Vice-Chair, National Roundtable on Environment and Economy

Questions for Discussion:

1. What should our standards of "success" be for UNCED? What are our chances of achieving them?

2. Compared to the situation twenty years ago, how would we evaluate the political climate for decision-making on the UNCED agenda issues:

- (a) domestically within Canada;
- (b) among industrialized countries;
- (c) between developed and developing countries.

3. How can we use UNCED to achieve an enduring change in the way the international community defines the problems of environment and development?
4. What factors will determine the prospects for major outcomes at UNCED on the key cross-sectoral issues of financial resources, institutional change and technology transfer?
5. What political inputs in the final months before UNCED, through the formal preparatory process or outside it, will improve the chances of reaching major outcomes on these issues?
6. What kind of change is achievable through a U.N "mega-conference" on the scale of Stockholm or UNCED?
7. What factors make it possible for such a conference to produce successful change?
8. What is required to institutionalize, domestically and internationally, the changes produced by such a conference?

17:00 Break; session to continue on the following day

Monday, 9 December 1991
Willson House

09:00 **SESSION THREE, CONTINUED**

11:00 **WRAP-UP:** John P. Bell, Special Advisor to the SSEA on the Environment

11:30 Depart Willson House for Lester B. Pearson Building

12:00 Lunch hosted by The Honourable Barbara McDougall, Secretary of State for External Affairs, for seminar participants, The Honourable Jean Charest, Minister for the Environment, The Honourable Monique Landry, Minister for External Relations and Minister of State for Indian Affairs and Northern Development (represented by M. Marcel Masse, President of CIDA), and The Honourable Pauline Browes, Minister of State for the Environment)

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BACKGROUND PAPERS

1. Buxton, G.V., **Lessons Learned from the Montreal Protocol, Law and Contemporary Problems**, August 1991
2. Copley, Brent Herbert, **Technology and the International Environmental Lessons for UNCED and Beyond**, International Development Research Centre
3. Culpepper, Roy, **Managing the Global Commons: The Economic Setting and Financial Options**, North-South Institute, Ottawa, Ontario, August, 1991
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5. Hurter, Christian, and Judy, Jill, **The Role of the Secretariat in Multilateral Negotiation**, Johns Hopkins University, 1991
6. McDonald, John W., **Global Environmental Negotiations: The 1972 Stockholm Conference and Lessons for the Future**, Occasional Paper Series, The American Academy of Diplomacy and The Paul H. Nitze School of Advanced International Studies, Johns Hopkins University, 25 January 1989
7. Runnalls, David, **What Should be Said at UNCED: Institutional Options for Sustainable Development**, Institute for Research on Public Policy, Ottawa, Ontario, 1991
8. Sohn, Louis B., **The Stockholm Declaration on the Human Environment**, Harvard International Law Journal, Volume 14, No. 3, Summer 1973
9. Strong, Maurice, **From Stockholm to Rio: A Journey Down A Generation**
10. Thacher, Peter S., **Global Security and Risk Management**, World Federation of United Nations Associations
11. **The Stockholm Declaration**
12. **The NGO Declaration from The Stockholm Conference**

*Draft
July 25/91*

ESSAY

The UNITED NATIONS CONFERENCE
on
ENVIRONMENT and DEVELOPMENT (UNCED 92)

and

LESSONS LEARNED
from the
MONTREAL PROTOCOL

G. Victor Buxton
August 1991

For Publication in the Journal "Law and Contemporary Problems"

UNCED 92 and the LESSONS OF THE MONTREAL PROTOCOL NEGOTIATIONS

FOREWORD

The population of the earth has increased by a factor of three; the global economy has expanded twenty times; the consumption of fossil fuels has grown by thirty times, and production by fifty times... all since the year 1900. Industrialized countries with 25% (quickly heading for 20%) of the world's population consume 80% of the world's goods. Developing countries with more than 75% of the world's population control less than 25% of the wealth.

Let me come closer to home. Alan Durning in his article¹ on the Grim Payback of Greed points out "As measured in constant dollars, the world's peoples have consumed as many goods and services since 1950 as all previous generations put together. Since 1940, Americans alone have used up as large a share of the earth's mineral resources as did everyone before them combined."

There can be no dispute. Human activities are now clearly threatening the very life support systems of mankind. The exponential growth in both global population and consumption and the concomitant resource demands cannot continue for much longer. Consider the demand for ozone layer depleting chemicals, such as CFCs, halons, methyl chloroform, and carbon tetrachloride, that are the cause of the destruction of our atmospheric life support system. If we stopped emitting all ozone depleting substances today some of those CFCs we have released will remain in the atmosphere for another three hundred or more years before they break down as a result of exposure to high energy radiation from the sun, releasing chlorine which then initiates further destruction of ozone. Ozone layer depletion is just one small piece of prima facie evidence of the global consequences of our collective lack of care and concern for our earthly living quarters...there are innumerable others.

We cannot allow this destruction to continue. As Wendell Berry notes⁵, "No place on earth can be completely healthy until all places are. The question that must be addressed is not how to care for the planet, but how to care for each of the planet's millions of human and natural neighborhoods, each of its millions of small pieces and parcels of land, each one of which is in some precious and exciting way different from all the others."

If we are not successful in creating global relationships that make all nations, both developed and developing, full

partners and fully committed to undertaking the required global responses to the many threats that now confront us, then our future and that of our children and their children ...at least on this planet ...is in peril.

As an Indian scientist² recently noted "the global environmental concern is all about caring and sharing and learning to live within the limits of the earth's environment". He believes that the gross imbalance that has been created by the concentration of socially and environmentally unsound economic growth in the industrialized countries and uncontrolled population growth in many developing countries is at the center of the current dilemma.

BACKGROUND

In December 1989, the United Nations General Assembly, expressing deep concern over the serious degradation of the global life-support systems and warning of future ecological disaster, negotiated and then passed a Resolution (a statement of collective political will) to convene the United Nations Conference on Environment and Development (UNCED). Resolution 44/228, which is now treated in the preparatory process as the UNCED Bible, sets out the purpose and scope of UNCED. The UNCED agenda has since been considered to be non-negotiable. The overview message of Resolution 44/228 is that the Conference "should elaborate strategies and measures to halt and reverse the effects of environmental degradation in the context of strengthened national and international efforts to promote sustainable and environmentally sound development in all countries". For the most part, the UNCED preparatory process is itself a review of process, primarily from the perspective of existing international infrastructure. UNCED will take place in Rio de Janeiro, Brazil, June 1 - 12, 1992. Since UNCED is expected to be attended by up to 160 heads of government, this Conference has been dubbed "The Earth Summit". In addition to heads of government, the international UNCED Secretariat estimates that there could be as many as 30,000 in Rio for this occasion: 4,000 government delegates, 3,000 media, 1,500 members of the UN Secretariat, 800 people from other UN agencies and 22,000 members of non-governmental organizations (NGO's) or independent sector groups. UNCED will mark the twentieth anniversary of the first UN environmental symposium, the United Nations Conference on the Human Environment, held in Stockholm in 1972.

UNCED 92 is expected to produce an environmental "Earth Charter", to be the stage for the signing of several global Conventions (Climate Change, Biodiversity, and possibly Forests); to develop an action plan for the next century (Agenda 21); to design a North-South bargain (technology transfer and financial assistance) and to provide focused or pointed recommendations for UN institutional reform.

The Secretary General of UNCED, Maurice Strong, has made a point of emphasizing that UNCED can not be a success unless its outputs are products of all sectors of society and, in turn, impact upon those same sectors. He also recognizes that governments alone can not achieve sustainable development because what is needed is fundamental behavioral change. A prime agent for change must be business/industry.

All the political statements will remain rhetoric unless industry decides to alter the very essence of its current value system and the way in which it chooses to calculate the rate of return on investment or otherwise measure its successes. Industrial policy must ensure that market prices reflect the full cost of using the environment. It must harness market forces as an agent of change. It must change the focus from one of an annual review of the balance sheet bottom line to one of a much longer time frame so as to allow for orderly planning and transition in a manner which does not draw down the ecological capital.. the common heritage of mankind. Finally, industrial policy must recognize the absolute economic necessity of assisting developing countries to assist themselves ... otherwise all enterprises, north or south, are in jeopardy.

THE ISSUES

For the person on the street who has yet to hear much about the planned Earth Summit, what is UNCED likely to be perceived as being about? Is it an attempted response to our failure to live in harmony with our environment? Is it about a world threatened by over consumption in the North and population pressures in the South? Is it about inappropriate development patterns everywhere? Is it about an industrialized global society that focuses only on short term gain and offers little regard for the long term ecological consequences of our current actions or, more generically speaking, the quality of life of future generations? Or is it seen cynically (at least in North America) as just another and perhaps bigger stage for the dissemination of rhetoric given the proximity of both Canadian and USA elections.

I believe that for governments UNCED is a chance, perhaps the last chance for the next twenty years, to build bigger and better partnerships.. partnerships among governments, industry and the NGOs including indigenous peoples. With such partnerships will come trust and hopefully support for developing and putting in place a common agenda to preserve our ecological heritage for future generations.

For industry, it may be a case of act or be acted upon. Industry is seen as being not only a prime source of the problem but also the very engine for the required change.

Hopefully, UNCED will mostly be about altering the mindset about what ultimately really matters in life. It must be about deciding on what is fair and what is enough. It must be about mustering the political will to create a climate conducive to change and cognizant of the needs of long-term survival. It must be about igniting and unleashing, in the proper direction, the industrial agents of change... market forces. It must be about changing the time frame and criteria for determining the viability and success of business enterprises. It must be about creating new partnerships... predicated on the concept of mutual need. It must be about creating a new global bargain where the 130 developing countries of the world will garner the required financial and technical assistance from the 30 developed countries of the world in exchange for commitments to remedial measures and, most importantly, development pathways which do not continue to repeat or perpetuate the mistakes of the development pathway followed over the last fifty years by the developed countries. It must bring about acknowledgment that the environment will remain under serious threat as long as there is famine, starvation and abject poverty. It must be about recognizing that there will always be environmental destruction as long as there is poverty and there will always be poverty as long as there is economic strangulation occurring as a result of overwhelming fiscal debt. It must also be about recognizing that there is also ecological debt...the debt incurred by the developed countries in living off the global ecological capital rather than just the interest. It must be about recognizing that there can be no true transfer of technology to developing countries without the simultaneous enhancement of endogenous capacity. It must be about charting a new development path for developing countries that does not create the destruction of former practices. It must be about redistribution of the worlds wealth and available resources in a more equitable manner, perhaps...investment for mutual benefit. It must be made to address population control. Finally, it must be about creating an environmentally secure world for future generations.

The major purpose of the Stockholm 72 Conference was to place environment in the center of the international agenda and thereby create the framework for preserving and perhaps enhancing the global environment. This was achieved but such a framework is not enough. Clearly, the earth's ecosystem is in even greater peril now than it was twenty years ago.

The sense now is that environmental and other resource considerations must be made to be synonymous with economic considerations. We must begin now to maximize our resources more in the context of global development. Resources requiring development include: natural (ecological capital and interest); human; human (skills, intellect, labor, social, culture); technological (expertise, experience); and information (electronic). The collective human brain must be thought of as

a global resource to be first nurtured then shared. We must begin now to forge linkages between:

- poverty and environmental degradation and the concomitant need to create sustainable livelihoods;
- population growth, unsustainable development and environmental degradation;
- the international economy and sustainable development (full environmental cost pricing; role of capital markets; economically level playing fields; harmonized and obligatory controls, etc.)
- fiscal policy, pricing, trade and sustainable development.

Full environmental cost pricing and the resultant economically level paying field will not happen in a competitive, market force oriented global society unless it can be an agreed mandatory consideration by all major players in all major trading blocks. A system of dis-incentives or penalties must be put in place for those who might be inclined to try to circumvent perceived environmental costs or delay joining in order to try to maximize profit over the short term. In order to create a true industry "buy in", Maurice Strong has enlisted the services of one of the world's leading entrepreneurs, Stephan Schmidheiny to provide business advice to the UNCED. Stephan has created the Business Council for Sustainable Development (BCSD), comprising 40 or so CEOs from large, medium and small businesses including many of the worlds "movers and shakers" from the private sector. Schmidheiny's task is to chart the business course for sustainability using market forces as the principal agent of change.

UNCED OUTPUTS

Let us examine for a moment some of the major anticipated outputs from the UNCED process.

The Earth Charter. The Earth Charter is expected to be the non-controversial centerpiece around which heads of government will converge in Brazil in June 1992. It is expected to be a "Magna Carta" on environment and development. It will likely be a statement of the principles governing the conservation of the global ecosystem. It will likely describe the obligation of States/ Organizations/ individuals to use the earth's natural resources in an environmentally appropriate and sustainable manner. It will set out a framework for the implementation of these principles in a fair and equitable manner. It will likely be eco-centered rather than people centered. It may very well constitute "soft law" similar to Principle 21 of the Stockholm 72 Conference. It will likely

be adopted by UNCED and endorsed by the United Nations General Assembly (UNGA). It may even be signed by each participating head of government. In addition, and in order to personalize what UNCED is all about, there is expected to be presented to all participants in the Conference, especially the Heads of Governments, a special "Earth Covenant"... a declaration of a personal commitment to a partnership with one another and with the earth.

Agenda 21. Agenda 21, as originally conceived by Maurice Strong, was to be an action plan for the 21st century. It was to set out program and policy guidelines at the international level. Each UN agency would create one. It would be an agency-specific action plan for linking environment and development. The sense now is that since what we are talking about is fundamental behavioral change, each sector of society (women, youth, indigenous people, etc) may be called upon to create an Agenda 21. How all such plans can be integrated in a manner which relates to accountability will be one of the Conference's challenges.

Conventions: Negotiations on Climate Change and Biodiversity Conventions are currently taking place in separate fora. The role of UNCED is to review progress of negotiations in these fora and offer direction with respect to timing and scope where and when appropriate. Only these two framework Conventions are likely to be ready for signature in Brazil in June 1992 although several States remain optimistic regarding the prospects for a Forests Convention also being ready for Brazil. Major regulatory provisions pursuant to these Conventions are expected to follow in future in the form of technically specific Protocols, such as a Climate Change Convention Protocol regarding forests as carbon sinks or a Protocol dealing with CO₂ emissions stabilization or reductions. A Convention on Forests now seems unlikely by 1992. We should, however, be in a position to agree on a statement of underlying principles that could be the substance of a Resolution at UNCED which would create a political commitment to a timetable for negotiating and signing such a Treaty.

Financial Assistance. This will be the key component of what is now being referred to as the "North/South bargain" which Strong hopes to achieve at Brazil. There are two distinct agendaae leading up to Brazil. The developed countries are the proponents of the various Conventions but recognize there can be no meaningful movement forward with this agenda unless the developing countries join in. The developing countries, on the other hand, see the price for this cooperation as a commitment by the developed countries to repay their ecological debt (the draw down of ecological capital) they view to have been accumulated through consuming annually, with only 20-25% of the

world's population, 80% of the worlds resources. They want this debt repayment to be in the form of commitments to capacity building (enhancement of endogenous capacity including educational and training assistance) in developing countries. The "bargain" will be the key negotiating point for Heads of Governments at Brazil.

Technology Transfer: This will be a key component of the North/South bargain. The issue of technology transfer is now recognized to encompass far more than just intellectual property rights. Recent studies conducted for the UK Government by Touche Ross⁶ have shown that many opportunities such as joint ventures exist to transplant environmentally sound technologies in developing countries but what is really needed is technically specific expertise, "know how", education, training etc. The current thinking is that conventional aid programs must be conceptually changed along the lines of investment for future mutual benefit. In past we have exercised the idea that if we can provide the people fish they can eat. The sense now is that if we can teach them to fish in an environmentally sustainable manner they can eat forever. The largest perceived impediment to technology transfer to developing countries is agreed to be the lack of absorptive or "endogenous" capacity. This commitment to capacity building, as previously noted, will be a key component of North/South bargain.

Institutional Reform. This will be a key political issue because at the seat of this issue is the question of power ...who or which agency controls. In analyzing each of the 21 issues on the UNCED agenda the preparatory committee is identifying elements or building blocks for Agenda 21 (the action plan for the twenty-first century) and will also be identifying recommendations on how these might be accommodated through institutional adaptation. I expect recommendations to emerge regarding the enhancement of the mandate and capacity of agencies such as UNEP, UNDP etc. This item is likely to be hotly debated because UN Agencies, which behave like quasi governments, react vehemently when they perceive their jurisdiction to be threatened. This is a reality that over which Governments must, like a responsible parent, step into and control so as to ensure the orderly and cost-effective revision of mandates.

What will happen after June 92? It must be recognized that UNCED 92 is, by design, a beginning not an end. What is uncertain at this time is how we are going to monitor our progress on forging the linkages between environment and development and whether at any time we are winning or losing the battle to save the planet. It is likely that there will be a need to create some new Agency or augment the functions of

one or more Agencies to oversee the implementation of, and report on, compliance with Agenda 21. It is also expected that it may be necessary to reconvene an UNCED every 5-10 years to re-inject the required political will to keep the process moving and make further UN institutional changes as required.

THE PROBLEMS

There are numerous existing and potential impediments to the achievement of the anticipated outputs from Brazil 92. Mandated by the UNGA itself, UNCED is the most senior UN forum for international process review of roles and responsibilities of UN Agencies. It is also the only forum mandated to try to assess and then make recommendations regarding the required cross-linkages among all these Agencies. In addition to the bureaucratic infrastructural considerations, there will be very high level policy decisions that will be required from this forum such as the elements of the North/south bargain. Will we sign framework Conventions on Climate Change, Biodiversity and Forests in Brazil? If so, who will pay and/or what mechanisms will be created to collect the funds required to achieve the objectives of such agreements?

The biggest problem in reaching an international consensus is likely to be major player intransigence due to parochial self interest and/or the fear of the application of the dining out principle...the richest person(s) dining at the table will be expected to pay the bill. Unfortunately, the success of international negotiations are still judged domestically in the context of winners and losers using short term economic considerations as the principal criteria. In many capitals the global environmental commons is still perceived as the property of all to be exploited for competitive advantage. Its preservation and enhancement, like any property owned by everyone, is likely to remain the responsibility of no one. A major challenge will be to convince the major economic powers that the highest and over-riding priority is the preservation of the environmental integrity and hence the viability of the planet. Debate on, and arrangements for, the equitable sharing of the short term financial burdens is an order of magnitude of lesser importance and can not be allowed to preclude the achievement of environmental security. However, without agreement on the financial aspects, there can be no North/South bargain and without this the process of decay will continue.

The developing countries recognize the voting power bestowed upon them by their sheer numbers and that the developed countries cannot by themselves solve the worlds environmental ills. Recognizing that 80% of the world's population resides in developing countries, any reductions in emissions or discharges could be quickly offset, if, for example, India or China alone were left outside any global agreements. As noted, the priorities of the developing countries are centered around

improvements in the quality of life (economic growth, poverty alleviation and educational enhancement etc). In early negotiating fora these were dealt with obliquely under the banners of financial assistance and technology transfer. This approach will not likely be viewed as being enough for UNCED.

Any global preservation strategy, to be successful over the long term, must enshrine the concept of sustainability. The developing countries fear that the pursuit of sustainability will mean restrictions on economic development restraint which will mean continued poverty or, at the least, a slow down in their planned rate of development.

There is also a general recognition that the USA will likely be called upon to be the single largest financial contributor (in gross but not necessarily per capita terms) to any new global bargain. This will not be a good news story for American politicians, especially close to a Presidential election. It is therefore imperative that the reality of the time when the commitment must be made be factored into the contribution arrangements that are made; we should not expect announcements of major financial contributions to be made at the time of UNCED rather, commitments to a process for first defining the cost requirements. It is therefore also imperative that the USA not be made to feel isolated during the negotiating process due to their reluctance to spend any "new" money and at this politically sensitive time of the Conference. What is acceptable politically in the USA at the time of UNCED is likely to be a controlling factor in what ultimately emerges. Put another way, the USA is likely to possess the "power of the purse" over the entire negotiating process and the Conference outcome. Nevertheless, the limitation this poses must be seen in the light of the fact that UNCED is a window of opportunity that will not likely reoccur for another 10 to 20 years, and it is imperative we maximize whatever output we can achieve.//////////

On a lower plane, a host of very fundamental technical problems exist. For example, by June 1992 we still won't yet know what sustainable development really means for many sectors. For example, what will sustainable development mean to a non-renewable resource harvester? Because of this, one should anticipate a general reluctance to commit, in concrete terms, to much of anything but in very general terms hopefully, to very many things. The idea being ...let us proceed in the direction we know in our hearts to be correct and "adjust" later as more detail becomes known. Another perspective is to not bother to try to define sustainable development in other than very general terms and thereby avoid the possibly endless philosophical discussions. Rather, treat it as a "guiding light", something to be aimed for.. a classical example of this being democracy. Perhaps the specific problems should best be viewed from the vantage point or perspective of each of the anticipated outputs.

With regards to the Earth Charter, there is considerable fear in many quarters that any such Charter, unless kept sufficiently nondescript could unnecessarily disrupt less stable governments and unnecessarily disturb even stable ones. This, of course, refers to the way in which the Charter may or may not imply rights and obligations. If the Charter is not legally binding then what we are talking about is an unenforcable code of ethics. This will not satisfy those whose over-riding concern is the preservation of the planet. As I noted earlier, some soft law analogous to Principle 21 of the Stockholm 72 Conference is expected.

With regards to Agenda 21, there is a growing sense that, rather than an action plan for the 21 century, we will end up with a documentation of what, for the most part, existing UN Agencies are already planning to do, or will propose to do, to respond to UNCED. The preparatory process, by the time of writing this paper, has yet to address: whether each State will produce an Agenda 21; what will be done with NGOs Agendae 21 from the NGO sectors and what, if anything, will undertaken to monitor and perhaps even enforce compliance?

With regard to the Conventions, it is not yet clear whether:

- a) a Climate Change Convention will be politically acceptable to the USA;
- b) enough of the fundamental issues and definitions relating to biodiversity can be agreed upon in time to create a framework Convention;
- c) enough of a consensus on forest principles will arise in time to sketch out a framework Convention on Forests in time for UNCED.

With regard to finances, there is as yet no commitment to provide new and additional resources as called for by the developing countries, by direct payments from governments or from new or novel economic instruments. In the absence of this, there can be no fruitful discussion towards finding the proper mechanism to collect, manage and distribute new funds.

With regard to technology transfer, this subject is still viewed in the North (by the owners of the patents) as an issue of future theft or confiscation, without adequate compensation, of intellectual property rights rather than in its proper perspective of a need to enhance endogenous capacity of which technology transfer is only one small part. There is a general recognition now that many acceptable means, such as joint ventures, now exist to transfer technology but not to enhance endogenous capacity. Unless these concerns can be resolved, there will remain little opportunity for forward motion.

This now takes me to the second theme of this paper. If we are to avoid reproducing the mistakes of the past and pursue pathways which maximize the potential for success we must pay very close attention to the lessons to be learned from the creative and innovative piece of international environmental legislation ever to be created ..the Montreal Protocol on Substances that Deplete the Ozone Layer. What follows are my personal perceptions plus those of my colleagues^{4,7}

LESSONS TO BE LEARNED FROM THE MONTREAL PROTOCOL

The negotiation of the Vienna Convention on the Protection of the Ozone Layer and the Montreal Protocol between 1983 and 1991 teaches us many lessons. Some of the major ones are as follows:

- the concept of using "creative ambiguity" as a negotiation technique for finding agreement during times of difficulty should have no place in Conventions dealing with matters as vital as the preservation of the planet. (This refers to the situation where the Parties are willing to interpret text differently for their own internal purposes thus allowing a perception that consensus has been reached.) This, in my experience, can paralyze the implementation of a Treaty at a later time when the political forces necessary to reach the required compromises are no longer available;
- success with respect to international negotiations can not occur in other than small incremental steps in the right direction. (Seeds can not be planted and germinated at the same time.) Those looking for a planetary fix on the first step will be disappointed;
- not all conflict can be resolved initially;
- building trust and acting in good faith will greatly reduce the adverse impact of unresolved conflict;
- we must determine and then quickly build on those items which can be readily agreed recognizing that acknowledgment and being part of the a consensus creates an optimum environment for further cooperation in future;
- the idea of new agreements must be sold to Governments on the basis of the need for risk management, recognizing also the need to maintain flexibility to accommodate change or amendment as new information is received;

- all participants, especially future Parties, must be made to feel that they are creating something much more important than their own special interest, i.e. the whole is much more important than the sum of its parts;
- political will must drive the process and public opinion must be there, or be created, to drive the political will. The need to create political will makes NGO participation in the process essential;
- the Montreal Protocol multilateral funding mechanism provides a clean and concise model for the equitable management and disbursement of funds. It also demonstrates how existing UN agencies can be made to, not only talk to each other, but, actually cooperate in the delivery of programs under the direction of the Parties rather than their own internal power base;
- flexibility in available options for achieving compliance (the basket approach of the Montreal Protocol allows States to choose whether to phase down one chemical a lot or all controlled chemicals a little in order to meet the Protocol obligations) will go a long way to reaching an early and lasting consensus;
- to reach a compromise between the North and the South, there must be a readily discernible relationship between financial/technical assistance and fulfillment of obligations relating to the Treaty obligations;
- it is much better to pursue a framework Convention and follow up with specific regulatory Protocols at some later date than to try and develop one legal instrument that attempts to do everything at once. For example, the Vienna Convention for the Protection of the Ozone Layer was signed in March 1985 after 3 years of tough negotiations. It entered into force in 1988. It provides a framework for facilitating international cooperation to protect the ozone layer. When this was signed I was concerned that we had fallen far short of what we had set out to do (i.e. establish agreements on specific reductions or at least a global ban on aerosol uses). In retrospect this was an incredible blessing in disguise. A Resolution passed at the time of the signing of the Vienna Convention called for the convening of another diplomatic Conference in two years to sign a regulatory Protocol. This gave us the opportunity to once again deploy the principle of incrementalization. We isolated the key issues that were impeding the negotiations, and dealt with questions such as: what were truly the anticipated effects (human and environmental) of failure to act? During this interim period, we convened a Conference of the world's experts and had them address the questions...heralding

the end of the need to further discuss these in the context of the negotiations. Similarly, we responded to the outstanding debate on what was the real growth rate in emissions and; most importantly, what was currently known about the technical feasibility and economics of more environmentally appropriate substitute chemicals. It also allowed time for European producers to realize that North American CFC producers did not have substitutes already waiting with which they could steal market shares.

THE MONTREAL PROTOCOL

The Montreal Protocol was signed in Montreal, Canada in September 1987. It entered into force as per the date set out in the Protocol on Jan 1, 1989 (70 Parties as of February 1991). It was amended in June 1990 to expand both its stringency and scope and to create a specific multilateral funding mechanism.

Some of the Montreal Protocol's key features are:

- * It puts into place a dynamic process for responding to all ozone layer destroying substances, not just those currently referenced in the Protocol;
- * By its very design (biennial global reviews of the science, effects, technology and economics) it sends a very important signal that these chemicals, if environmentally harmful, will not be tolerated thereby maintaining the pressure for orderly and cost effective transition away from their use;
- * It recognizes the special situation of developing countries. By this, I mean it is predicated on the understanding that developing countries were not major contributors to the historical component of the ozone layer depletion problem and their pressing priority is poverty alleviation for which they require industrial development without financial or technical disruption;
- * It provides incentives such as a moratorium on control measures for up to ten years and access to financial and technical assistance for developing countries to become Parties;
- * It provides dis-incentives/penalties such as potential trade restrictions for countries that choose not to join and thereby refuse to accept their environmental obligations to future generations;
- * The Montreal Protocol introduced the "accordion" concept for introducing Treaty obligations. The EIF (entry into force) was as per a fixed date (January 1, 1989) set out in the

Protocol (providing states had ratified) and the control measures phasedown clock started running at that time. Anyone becoming Parties after the clock started running would have to join at the control level called for by the phase-down schedule at the time.

There were, in my view, no perceived losers in the Montreal Protocol negotiations and there was one very big winner... the environment. This process proved that global society has matured to the point that the development of public policy can now actively involve all major stakeholders ... governments, industry, environment groups and others. These groups were able to work together to preserve the common atmospheric heritage of mankind.

Perhaps the most important achievement of the Montreal Protocol was to demonstrate that global agreements on environmental risk management are not only possible but compulsory if we are to move from a react-and-cure mode to one of anticipate and prevent.

THE MONTREAL PROTOCOL AS AMENDED

Given the intended audience for this paper (lawyers), I hope I can be forgiven this next statement. This agreement is so novel and precedent setting largely because the substance was not produced by lawyers. It was written by non-lawyers ... mostly engineers, scientists and policy makers. Lawyers were brought in to draft or re-draft the agreed text on the various issues in a legally correct manner. If lawyers had been asked to prepare the draft Treaty, I submit, based on my perception of their case law training, this Treaty would have probably looked very much like the last one. The Montreal Protocol did not start off by using a legal template but rather sought to solve each problem on an individual or clause-by-clause basis paying almost no attention to how these problems had been addressed in other Treaties. The eminent international lawyers (John Allen, Canada; Patrick Szell, UK; Professor Lammers, Netherlands and Debbie Kennedy, USA) then did an excellent job of creating a functional Treaty out of the twelve legged camel we, the negotiators, had created.

The amendment of the Montreal Protocol in London in June 1990 saw the addition of a number of new and innovative precedent setting features, notably the creation of a multilateral funding mechanism to assist developing countries to comply with the Protocol provisions.

These provisions called for the creation of a small Executive Committee of the Parties (14 members) balanced between developed and developing countries (donors and recipients) to direct and and monitor the implementation of specific operational policies, guidelines and administrative

arrangements of the fund. The Executive Committee consists of seven members from developed countries and seven from developing countries with the office of Chair and Vice Chair rotating annually between the two groups. The size of the Committee took into account the need to remain as small as possible while respecting the need for geopolitical representations.

It is the responsibility of the Executive Committee to:

- exercise final authority for implementation of the fund;
- develop the three-year plan and budget including allocation of resources among implementing agencies;
- develop project eligibility criteria;
- monitor and evaluate expenditures and to report annually to the Parties;
- coordinate and oversee fund-related activities of cooperating and administering agencies (UNEP, UNDP, World Bank).
- nominate the Chief Executive Officer of the fund for appointment by UNEP
- consider and, where appropriate, approve country plans.

Since 1990 we have learned a number of lessons from the experience of the multilateral Fund that need to carry over into the UNCED process.

Some of these are as follows:

- * There seems to be a sense emerging amongst those involved with the Executive Committee of the Multilateral Fund of the Montreal Protocol that the Agency that oversees the development of the Treaty or Convention should NOT be the Agency mandated to assume responsibility for its implementation. To do so would fail to make optimum use of the tremendous strengths of the various Agencies already in place. What is needed is a reassignment or designation of specific deliverables from each Agency and some body to review and coordinate to ensure it happens.
- * The time required to initiate a new mechanism such as the Executive Committee of the Montreal Protocol is much longer than one might expect. If the intent is to bring together existing players / UN Agencies with an expectation that they will be able to work together in accordance with a new script then one must, be prepared

for a long period of adjustment. The lag time will be filled initially with declarations of why one Agency or other should take on the total task. Each Agency with historically enshrined notions, prejudices etc must be confronted and hopefully adjusted through dialogue (consensus building). It takes time for the new players to get to know each other to the point where there is sufficient trust to allow them to work effectively together. This unavoidable time lag must be built into the planned implementation schedule.

- * Historically, we have dealt with problems both domestically and at the UN Agency level on an issue by issue basis. This is very much akin to treating the symptoms of a malady without addressing the root cause of the disease. If UNCED hopes to show progress on forging the required relationships between environment and development / economy then we have to move straight to the root causes and solutions such as education, research etc. It will not be enough, or perhaps even correct, to predicate a global action plan such as Agenda 21 on an Agency (Issue) compartmentalized basis. We must reach out and address the fundamentals on a multi-agency basis to facilitate real change over the next decade.
- * Any framework Convention (Climate Change, Biodiversity) developed pursuant to UNCED, should avoid prescribing specific control measures. Rather, it should establish itself as the equivalent of "authorizing legislation" with the "regulations" being left to Protocols or custom designed and free standing Treaties which have been specifically tailored to optimize the response to designated problems. Furthermore, controls or regulations set out in the Protocol should be designed to send clear and early signals to the marketplace, to both producers and consumers, so as to facilitate orderly, which translates to cost effective, transition to environmentally sound chemicals and technologies.
- * Recognizing the utility of the concept of incremental progress, the need for "special fixes" to allow certain States with unique problems to join the Treaty must be acknowledged. Such an "equity" clause was provided in the Montreal Protocol to those States with centrally planned economies. For those States the base year set out in the Montreal Protocol was shifted from 1986 to 1990 in recognition of the legally binding nature of their five year plans, and the need therefore for greater flexibility if they were to be able to become Parties early. One should not fear "special Fixes" nor view them as gaping loopholes, providing of course, they are governed by sunset clauses. They will assist greatly in creating the initial consensus required and facilitate

early and broad-based movement in the right direction.

- * A major issue in striking the North / South bargain will be the degree to which access to financial/technology assistance will be tied to compliance with Treaty or other obligations. A major difficulty will occur in trying to establish equitable treatment for different groups of Parties, not only with respect to Conventions but also generically in the context of the overall bargain. A major problem will be agreeing on the criteria upon which differentiation is based.
- * One must also consider which factors or criteria should determine how general and specific Treaty responsibilities are allocated/shared and how these will affect the timing of compliance. The lessons from the Montreal Protocol are that these criteria should be kept simple and easily understandable and not easily amenable to distorted interpretations. The criteria should also be tied to whatever commitments arise regarding financial assistance/ technology transfer/technical assistance.
- * In the case of the Montreal Protocol, the criterion established for differentiating between Article 5 Parties (and all others) was that Parties that produce less than a specified amount (0.3 Kg/capita) of controlled substances annually (and appear on a designated UN list as a developing country) do not have to reduce their production/consumption of the specified substances for a ten year period. These Parties are also eligible to qualify for financial assistance to replace controlled substances and certain technologies. The lesson from the Montreal Protocol is that to exercise the right to do nothing for ten years leaves one living in a fools paradise. It is only by accepting the same phase-down schedule as the rest of the world and the currently available financial assistance to facilitate the transition is one able to move forward technologically and have a state-of-the-art technological basis for production of such essential products as refrigerators. To stand back leaves such countries, by definition, a generation behind.
- * Under the Montreal Protocol, countries that produce less than a specified amount of certain substances on an annual per capita basis are eligible for financial assistance from the Multilateral Fund. Donations to the fund are by Parties that produce greater than the specified amount of controlled substances per capita on an annual basis. These "donor" contributions are based on the United Nations scale of assessment. The formula for donations will not be so simple with UNCED unless contributions are predicated in the same way on a series

of Conventions and then totaled (assuming a total can be agreed upon) to determine the overall required contribution. The scale of assessment will also likely be controversial when one considers the preliminary estimates for decadal costs for addressing the major Conventions: Ozone Depletion (\$10 Billion); Biodiversity (\$35 Billion) Climate Change (\$350 Billion). It may be necessary to tie donations and contributions to pollutant load (application of the polluter pays principle). Equally, the ability to acquire resources may have to be tied not only to compliance with Treaties but also to positive movement on population control, etc.

I would like now to focus on the very difficult question of which institutions should be involved in the administration and execution of the responsibilities of financial mechanisms. The Multilateral Fund, established under the Montreal Protocol, is being implemented with the assistance of the World Bank, UNDP and UNEP. Although this arrangement uses the expertise of existing institutions, it cannot be regarded as the only or even the best answer for the administration of assistance under other agreements dealing with global environment/development issues. We need to first look logically at what we are trying to do, what specifically we need money for, where and how best can this money be collected and only then, how best can we facilitate this.

Firstly, we are trying to create a sustainable planet. That means, sustainable environment, sustainable socioeconomic development, sustainable populations and livelihoods. We will need finances for at least three purposes:

- 1) Overhead costs of Conventions and Protocols;
- 2) Operating costs for augmentation of responsibilities of many UN Agencies;
- 3) Capacity building in developing countries

It is likely that we will need to establish several mechanisms for receiving money from different sources such as an Earth Fund to receive donations from individuals and Foundations; the GEF (global environmental facility - a three year pilot funding project with the World Bank); a UN Agency such as the United Nations Development Program (UNDP) expanded for the purpose of facilitating resource transfers for capacity building. Any such mechanisms will have to be fully reviewed and assessed.

It may be useful to set up a series of parallel multilateral funding mechanisms such as the one under the Montreal Protocol. A separate financial assistance arrangement under a climate regime may be more manageable than one set up, for example,

under the GEF. Major considerations would include the size and range of issues, technologies, processes, as well as criteria for eligibility to be considered in the development and implementation of diverse programs and projects to limit green house gases. Introduction of these into an existing institution may give rise to numerous barriers. To centralize a financial mechanism that will perform such diverse functions may result in the loss of flexibility - something that all agree must be retained as much as possible.

It may also be useful to consider the concept of a number of "pockets" within an overall fund, with each pocket allocated to, for example, specifics such as "technology", "processes" with financing provided by the most relevant / suitable/experienced developed countries. In this case, the GEF could provide some valuable insights, and the potential for expansion of the GEF to include such pockets should be explored.

In assessing the suitability of creating any financial mechanisms for UNCED, the perspective of the developing countries must be considered. Many perceive the World Bank (central executing agency) as a missionary agency for western economic concepts, and as being controlled by the developed countries and insensitive to the needs of developing countries.

The Montreal Protocol allows for receiving a credit (against contribution requirements) for other forms of multilateral, regional and bilateral cooperation, up to 20% providing this assistance is consistent with a Montreal Protocol criteria (the cooperation must contribute to meeting obligations under the Protocol). This provision could likely be useful under a Climate Change or Biodiversity regime. It is likely that some potential donor Parties will favor an allowance of much more than 20% and this will undoubtedly again become a subject of disagreement with developing countries (they prefer money to be put in the pot with no strings attached) requiring negotiation.

The Montreal Protocol does not contain any provisions for adaptation to the effects of ozone depletion. Some groups of countries are likely to insist that future agreements recognize adaptation and that they contain provisions to facilitate adaptation to changes, for example, in climate, sea level, biomass or biodiversity, etc..

Through various fora, such as Conferences of the Parties, research and assessment panels, Ad Hoc working groups, the Executive Committee and sub-committees, the provisions of the Montreal Protocol are implemented, and progress in achieving its various objectives is monitored and reviewed. Issues brought for consideration before the Parties include: reporting on the status of implementation; science; data on production, imports and exports of controlled substances; and financial implications and arrangements. Collectively, this information

provides the basis for amendments / adjustments to the agreement. So far, the Montreal Protocol has been amended once, and this occurred within three years of its adoption and less than one year after entry into force. Amendment every 3 or 4 years, to reflect new scientific findings and to stay in tune with its objectives, should be seen in a very positive light and, if possible, emulated in UNCED.

Some have argued that, under the Montreal Protocol, inadequate attention is paid to the need for more and better science and measurement. The amount of funding provided for these purposes is insufficient considering the enormity of the problem. In order to ensure efficient use of all available resources, the scientific community specializing in the relevant issue must be explicitly, directly and cost-effectively involved. Only in this way can sufficient research and measurements be supported to formulate changes in limitation policies to meet real needs, and to permit sensible adaptation strategies for Climate Change issues such as sea level rise, water resources, agriculture, forestry, health, etc. The future role of scientific groups, in taking on research, coordination, consensus building and related scientific functions needs to be explored for application in the broader context of UNCED.

Under the Montreal Protocol, reporting on regulatory and implementation activities of Parties is the responsibility of the Parties themselves. Some developing country Parties (Article 5 Parties) have indicated they do not have sufficient resources to undertake their reporting responsibilities. Success in reporting is critical in light of the need for the preparation and assessment of implementation of national strategies. Such reports will have to be used to monitor compliance with Agenda 21 as well as specific convention requirements. Ways and means will have to be found to assist developing countries to prepare these reports.

Some procedures have been set up under the Montreal Protocol to monitor and report on non-compliance. When the issue was first being explored, we had before us two proposed approaches: (1) the "big stick" approach; (2) the "arm-over-the-shoulder" approach. We decided, at least for the initial period, (the next 3 - 5 years) on the latter, ie resolving non-compliance issues through administrative action by the Secretariat and diplomatic contacts between Parties. Further decisions on non-compliance would be taken at meetings of the Parties and, for the time being, should be recommendatory, rather than mandatory. This "soft" approach is a useful starting point but may not be adequate politically, to sell UNCED vis-à-vis "bang for the buck" from donor countries.

The basis for the control mechanism for the Montreal— Protocol (which now reads Consumption = Production + imports - Exports) was first introduced by myself (unpublished paper) at

a Leesburg Virginia workshop (September 1986) sponsored by the United States Environmental Protection Agency. The purpose was not to address import or export considerations per se, but rather to allow all 160 UN designated countries (and not just the 28 CFC producing countries) to share in the control obligations. My original idea set out in my Leesburg paper was burden sharing based on emission quotas which in turn would be derived from a consideration of GNP and population. Because of USA concerns regarding winners and losers the original idea was modified to define the left hand side of the equation via an un to disregard reference to current emission levels. We eventually decided to call it consumption. It may be time now to revisit the original formulation as a fair mechanism for burden sharing certain aspects of the various Conventions or Protocols in the context of UNCED. This would amount to the application of the polluter pays principle.

There will undoubtedly be a requirement for some form of constraint on Parties receiving financial assistance so that they don't further expand the very plants we are trying to close down. Under the Montreal Protocol Article 5 countries are allowed to continue to produce controlled chemicals but for purposes of domestic consumption only. Furthermore, no developing country Party may export controlled substances to non-Parties after a specified date. Import by any Party of controlled substances from non-Parties is not allowed after a specified date. These provisions indirectly bind non-Parties because they reduce demand for controlled substances that are not regulated (by non-Parties) under the Protocol and push non-Parties to sign (so they can continue trading, at least in the short term). This technique will hopefully see further application relative to UNCED.

Under the Montreal Protocol, production rights of one Party may be transferred to other Parties, as long as the combined total production of the Parties exchanging production rights does not exceed production limits set out in the Protocol. This mechanism (bubble concept) designed to facilitate cost-effective industrial phasedown, could again see application in the context of UNCED.

When it comes to trade controls and implementing the global phasedown in consumption, the Montreal Protocol focuses on "bulk" chemicals rather than chemicals contained in products. This approach for trade restriction purposes, is orders of magnitude simpler to administrate than trying to deal with the thousands of products containing or made using CFCs. Nonetheless, products containing controlled substances will likely be elaborated at a future date (if required). The idea is that we would apply additional pressure on non-Parties (closing down their markets) by banning the import of these products from non-Parties after a specified date. This technique might also offer some utility for UNCED.

Carrying this idea one step further, the feasibility of banning import from non-Parties of products produced with, but not containing, controlled substances is also referenced in the Protocol and needs to be examined for broader application to UNCED.

Under the Montreal Protocol, export to non-Parties of technology for producing and using controlled substances is discouraged as is the provision of subsidies, aid, credits, guarantees or insurance programs for products, equipment, technology or plants to facilitate the production of controlled substances. Experience since the time of signing the Montreal Protocol has shown that "discouraging" is not enough. For example, one major USA CFC producer sold (after the signing of the Montreal Protocol but before its entry into force) their obsolete CFC technology (the actual plant they were using to make the CFCs. They were switching to the more environmentally desirable HCFCs) to India in total contradiction of the expressed views and spirit set out in the Protocol. It is obvious that words like "discourage" carry little weight when dollars are to be made. Therefore, the lesson learned is you either agree to a ban or omit the reference totally. Otherwise you end up financially penalizing those with environmental ethics and creating the illusion that such unethical behavior does not exist.

CONCLUSIONS

The greatest lesson of all for UNCED is perhaps illustrated by the most dramatic achievement of the amendment of the Montreal Protocol which was accomplished in June 1990. This achievement was NOT the augmentation in stringency and scope of the technical provisions but rather the introduction of the ethical revisions. For the first time in history we were able to strike a global bargain in which the most affluent 20-25% of the world's population (the 30 developed countries) will provide the less fortunate (130 developing countries) with financial and technical assistance so that they may proceed now with their Treaty commitments (clean-up costs associated with a problem largely not of their making), at no net cost to their already cash-starved economies. Hopefully, UNCED will provide a greatly enhanced opportunity for all of us to ply our trade or lend our skills to something that really matters.

In concluding I'd like to return to the higher plane. As Wendell Berry⁵ states "We all live by robbing nature..but our standard of living demands that the robbery must continue. There can be no successful economy apart from Nature or in defiance of Nature. No place on earth can be completely healthy until all places are."—If our wants remain insatiable there can be no such thing as enough. These observations sum up what UNCED is all about. Environmental destruction will

continue to occur when people have either too little or too much. UNCED therefore must be made to be about caring and sharing.

UNCED, if successful, will chart a course for defining what is enough. UNCED is a planned strategic act of power sharing. It is a unique opportunity to build relationships, to empower the disenfranchised, especially women (the de facto environmental stewards in the developing world) to bridge cultural differences, to demonstrate leadership and political will; and, most importantly, to preserve our environmental heritage.

Let me close with a reminder that there is very little difference between the level of happiness found in very rich or very poor countries. As H. D. Thoreau notes¹ "A man is rich in proportion to the things he can afford to let alone." An environmental conscience like a religious conscience stems from an awareness brought about by personal decision taking on what amounts to moral issues. Respect for the environment can not be legislated through Conventions but it can nonetheless be acquired through thoughtful consideration. Hopefully Rio in 1992 will be the right time and place for this consideration.

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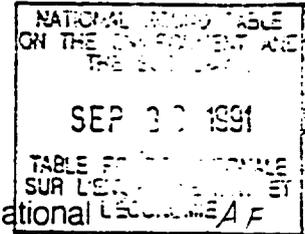
Footnotes:

- a) Stockholm 72 Conference - Principle 21

"States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limit of national jurisdiction."



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**TECHNOLOGY, ENVIRONMENT, AND DEVELOPMENT:
OPTIONS FOR CANADA AT UNCED AND BEYOND**

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September 30, 1991

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Responsibility for the views expressed in this document, of course, rests with the author. While the report draws on the experience of IDRC, it does not necessarily represent the views of IDRC or its Board of Governors.

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Executive Summary

Debate on transfer of environmentally sound technologies has focused on financial, institutional and legal mechanisms by which technologies currently applied in the North can be transferred to developing countries. Canada can provide international leadership in presenting a wider perspective, concentrating on the role of technology in promoting sustainable development, and the potential of international cooperation in fostering this role.

Such a perspective should be based on the following insights:

- it is impossible to identify in advance an exhaustive list of environmentally sound technologies; instead, identification of such technologies will be an ongoing process;

- debate must deal with the ways in which the entire vector of technological change can be altered in the direction of greater environmental sustainability; in addition to technology transfer, this implies support to the creation of new scientific knowledge in developing countries, and to incremental improvements to technology over time;

- the availability of relevant technologies and the degree of concentration of supply vary widely across sectors and applications; it is a mistake to assume that developing countries cannot simply pull the necessary technologies 'off the shelf';

- the ultimate goal of international action should be to enhance the capabilities of developing countries to select, import, assimilate, adapt and create the relevant technologies. Concern with the economic and environmental efficiency of a given technology must be matched with a concern for its integration into the local productive structure, the conditions by which it is acquired, and the extent to which hardware imports are accompanied by effective transfers of knowledge and capabilities.

- there is increasing recognition that environmentally sound technologies can also result in increases in economic efficiency, and that transfer of technology can play a role in enhancing the competitiveness of technology suppliers as well as recipients. There is thus scope for 'win-win-win' solutions which meet the development needs of the Third World, the commercial needs of technology suppliers, and the environmental needs of the planet.

In terms of concrete Canadian action, this report suggests a 'two-track' approach, in which efforts to reach a consensus among the relevant actors are balanced with more immediate, independent actions. The report outlines a set of finite, concrete actions which should be pursued regardless of the success in securing a comprehensive multilateral agreement, or the precise form of that agreement.

1) Clarifying the Rules of the Game

Canada should reaffirm its position that in the case of commercially-developed, proprietary technology, recognition of intellectual property rights is essential to the continued development of much-needed technologies. At the same time, however, Canada should resist pressures to force developing countries to unilaterally extend property rights into new and controversial areas, particularly regarding living organisms.

Canada should reaffirm that in the case of privately-owned technologies, market rates should form the basis for compensation to the owners of technology. On the other hand, developing countries should be provided with concessional financing in order to allow them to make such purchases, and should be assured that such financing would be additional to existing commitments for development assistance. Canada should also press for renewed discussions on some form of code of conduct on technology transfer to guard against abuses of strong market positions.

2) Increasing the Supply of Technology from Abroad

Canada should support initiatives along the lines of the multilateral fund established under the Montreal Protocol, in which negotiations between technology suppliers and recipients are separated from financing of developing country purchases. At the same time Canada should ensure that developing country concerns about the governance of such institutions receive due attention.

Given the difficulty of reaching agreement on a comprehensive multilateral fund, attention should also be given to more limited steps to increase the supply of technology. A variety of actions are possible, depending upon the type of technology in question (proprietary technologies; public domain technologies; 'emerging' technologies and pre-commercial research; and, 'soft' technologies or know-how). Failure to resolve some of the broader issues on the table (intellectual property issues, for example) should not forestall unilateral actions by Canada in this regard.

3) Promoting Adoption and Assimilation of Technologies

Adoption of environmentally sound technologies is limited both by distorted price signals and by non-market barriers. Canada can promote technology adoption in a number of ways: financial and technical assistance for specific aspects of policy reform (regarding investment criteria, for example, or regulatory standards); funding of demonstration projects illustrating the technical and economic efficiency of environmentally-sound technologies; financial and technical assistance to promote technology-sharing arrangements among developing country firms to overcome the high capital costs of many technologies; or, assistance to improve the technical expertise of local and regional lending institutions in developing countries.

Alongside technology adoption, attention must also be given to the assimilation of technologies. Canada should ensure that effective assimilation of imported technology is an explicit objective of any initiatives in the field of environmentally sound technology transfer -- by building adequate training into ODA-funded projects, and by providing incentives to promote such involvement by private sector suppliers.

4) Improving Needs Assessment and Technology Choice

An adequate basis in 'the science of the environment' is crucial if developing countries are to make adequate assessments of their technological needs. The kind of collaborative needs assessments carried out under the Montreal Protocol are a potentially important tool of capacity-building. Canada should support the application of similar exercises in the follow-up to UNCED, and should give particular attention to the methodology to be used in such assessments.

There is also a need for better access to information on the range of technological options available to developing countries. Canada should support efforts to improve coordination among the various inventories, databases and information services now in operation, either by the creation a single clearing house and information network on environmentally sound technologies or (perhaps more fruitfully) by instituting more effective interchange among sector- and location-specific inventories.

In addition, careful thought needs to be given to the design and implementation of information systems to ensure that the appropriate clients are in fact reached, and that the appropriate support is available to promote diffusion of the information within supplier countries. There is also a need for the design of improved teaching materials, manuals, and assessment criteria to permit the more effective evaluation of technology alternatives.

5) Strengthening Indigenous Innovative Capabilities

Canada can pursue a number of independent actions to strengthen developing countries' innovative capabilities, ranging from support to twinning programs, to enhanced scholarship support to developing country students, to the kind of research support provided by IDRC.

Given the economies of scale associated with scientific research and the limited resources available to most developing countries, however, some form of collaborative effort in this area is essential. Canada should actively support the UNCED Secretariat proposal for the establishment of regional capacity-building programs, bringing to bear its own experience (via IDRC and other institutions) in strengthening research networks in developing countries. Canada should also use its 'convening power' to bring diverse views and actors to the table, in order to develop concrete avenues of action.

I. Introduction

The debates leading up to the United Nations Conference on the Environment and Development (UNCED) have given new life to the subject of North-South technology transfer. To a large extent, however, this re-examination has been narrowly bounded, focusing on the financial, institutional and legal mechanisms by which technologies currently applied in the North can be transferred to developing countries. Other issues -- the nature of developing country technology needs, the role of developing country research systems or the factors affecting the adoption of technology -- have been downplayed. Canada can and should provide international leadership in presenting a somewhat wider perspective, concentrating on the role of technology in promoting sustainable development, and the potential of international cooperation in fostering this role.

The agenda facing the international community is an increasingly broad one. Public attention and political action in the North have focused on the 'global change' issues: ozone depletion, greenhouse warming, deforestation and the erosion of biodiversity. But alongside these 'live' issues are a series of more 'latent' environmental problems which have important impacts in developing countries, but which have attracted far less international attention -- either because they do not directly affect industrialized countries (desertification, for example), or because industrialized countries have already taken action to deal with them, however imperfectly, within their own borders (hazardous wastes, solid waste management, the urban environment, etc).¹

Addressing this second set of issues is essential if developing countries are to be engaged in global environmental action. It also underlines the intimate connection between environment and development. Efforts by the world community to tackle current environmental threats must confront the realities of burgeoning world population, of disparities in resources and opportunities within and among nations, and of the crippling effects of poverty on the environment.

What role can technology play in a poverty-focused approach to environmental protection? Technology is by no means a panacea to environmental problems, nor should we exaggerate the ease with which technological solutions developed in one socio-economic context can be transferred to another.

Nonetheless, it is clear that any strategy to promote more sustainable patterns of development must draw upon technology -- understood here as the mix of knowledge, organizations, procedures,

¹ I am grateful to Ashok Desai for suggesting the terminology of 'live' and 'latent' issues.

machinery and equipment and human skills which are combined to produce socially desired products. Environmental damage need not be an inevitable consequence of technological advance and economic growth. New technologies already available provide a wide range of responses to the recognized problems of the environment, and potential future technologies hold out the prospect of even more radical changes. What has until now been lacking is a commitment to pursue the host of social, legal and economic reforms needed to enable economic development, environmental protection and technological change to work toward a common end.

This too is beginning to change, and the UNCED conference is one indication of that change. Industrialized and developing countries now agree that given the tremendous disparity in scientific and technological resources between North and South, any environmental 'bargain' must include a commitment to provide developing countries with the financial and technological resources necessary to confront current environmental threats. Yet the precise nature of such a commitment has proven to be one of the most thorny and divisive debates in the lead-up to UNCED.

In part, this is because of the lack of a clear precedent for the current negotiations. The closest parallel, of course, is the Montreal Protocol on Substances that Deplete the Ozone Layer. The 1990 London amendment to the Protocol broke new ground in negotiations on international technology transfer, introducing three unprecedented amendments: an obligation of signatories to transfer the best available technologies on "fair and favourable" conditions to developing country Parties; the creation of a multilateral fund to finance the incremental costs to developing countries of compliance with the Protocol; and, a clear statement that the ability of developing countries to fulfil their obligations under the Protocol was dependent on the implementation of the provisions regarding financial cooperation and technology transfer.

There is little doubt that the Montreal Protocol experience will form at least an implicit backdrop to the UNCED debates, particularly those on climate change. The type of agreements reached in the ozone accord have set a bench-mark against which developing country participants will now judge subsequent agreements in other fields.

But the Montreal Protocol offers at best a limited precedent for the debates at UNCED. While the scientific evidence regarding climate change is strong, it has not yet attained the level of consensus which persuaded the Parties to the Montreal Protocol to take dramatic action on ozone depletion. Equally crucially, the Montreal Protocol succeeded in large part because of the limited nature of the problem under consideration, the narrow range of alternative technologies to replace chlorofluorocarbons (CFCs), and the resultant ability to predict and limit the financial

obligations resulting from the treaty. Even if we consider only the climate change debate, the sheer scope of the problems on the table, the range of technologies potentially at issue, and the uncertainty regarding costs may stall attempts to reach agreement on issues of financial and technological cooperation.

To a large degree, discussions on transfer of 'environmentally sound' technology have mirrored earlier debates about North-South technology transfer more generally, both in the gulf separating the Northern and Southern positions, and in the nature of the issues addressed.

Northern countries have stressed the following four points:

- the need to ensure adequate financial compensation to inventors, via developing country recognition of intellectual property rights;
- a conviction that as far as possible, technology should be provided on non-concessional (commercial) terms, with no across-the-board guarantee of concessional access;
- a desire to limit the range of technologies under consideration, in particular by de-linking the climate change convention from other issues under discussion at the Summit; and,
- a preference for working through existing institutions in order to channel funds to support technology transfer activities, particularly the World Bank's Global Environmental Facility (GEF).

Within the Northern 'camp', the United States has adopted the hardest line in terms of intellectual property rights and non-concessional access. Other countries, notably Japan and Germany, have taken a softer line -- perhaps reflecting their leading positions as suppliers of environmentally sound products, and the perception that the principal economic benefits lie in promoting emerging environmental industries.

The Southern position, conversely, has tended to stress the following points:

- the need to secure access to the latest available technology, including proprietary technology, without conditionality in terms of reform of Southern patent legislation;
- the importance of concessional transfers, with the North bearing the brunt of the costs of providing the relevant technologies;
- the need to consider the entire range of environmentally-sound technologies, not just those of relevance to global warming; and,
- the importance of channelling funding through new institutions which would ensure an adequate voice for the

developing countries in their constitution and operation.

The emerging Southern position also puts emphasis on the need to negotiate a trade-off between Northern access to Southern plant varieties and Southern access to the results of biotechnology research being carried out in the North. More generally, many developing countries look to UNCED as an opportunity not only to tackle crucial environmental problems, but also to jump-start stagnant flows of technology and capital.

There are, however, some emerging signs of a movement away from this North-South deadlock. In the first place, there is a somewhat tentative consensus emerging that intellectual property issues are not the key constraint to effective action. This is not so much the result of any softening of positions on the issue, but rather a recognition that many of the relevant technologies are not patent protected -- but instead involve public domain technologies or 'soft' technologies (managerial expertise, for example).

Second, there is an increased recognition in both North and South that any effective strategy must involve not only the transfer of technologies from North to South, but also the strengthening of indigenous Southern technological capabilities, through a variety of training and capacity building measures. In general this is a positive sign, although developing countries also worry that industrialized country support for capacity-building and 'technology cooperation' may serve to detract attention from the crucial issues of financing and concessionality. On these latter issues, as well as on the scope of technology transfer provisions, there is no indication of a narrowing of the North-South gap.

II. Bases for Action

Unlike the debates over financing and institutions -- which have quickly moved to the consideration of a relatively narrow range of options for action -- the technology transfer debate has not converged on an agreed-upon range of choices. Instead, debate has tended to concentrate on broad principles (intellectual property rights, concessionality, 'technology cooperation').

There is thus a need for concrete, specific proposals which would help to bridge the gap between North and South. Discussion of concrete actions, however, must begin with a clear understanding of the nature of the problem. In this regard, earlier research on issues of science, technology and development -- much of it supported by IDRC -- yields several important lessons of relevance to the current debates. The pages which follow identify five broad insights which should guide Canadian action.

1) Environmentally Sound Technologies

In the first place, it is important to stress that environmental "soundness" is a relative concept. There are multiple and often conflicting criteria of environmental soundness, and few technologies will be 'best' on all such criteria. Over time, judgements about environmental soundness will change, as a result of the development of improved technologies, or the accumulation of evidence about the effects of supposedly 'benign' technologies (viz. the example of CFCs). Moreover, the environmental soundness of a particular technology will in practice depend crucially upon the conditions under which it operates.

This by no means indicates that environmentally sound technologies do not exist. What it does suggest, however, is that it is impossible to identify in advance an exhaustive list of environmentally sound technologies, and thus to limit concessional financing to this list. Instead, identification of such technologies will be an ongoing process, which will itself demand significant effort. As will be discussed in the pages below, one of the crucial areas for action is the strengthening of the capabilities of developing countries to define their technology needs, and to assess and select among alternative technologies.

2) The Sources of Technological Change

Much of the scope for environmental improvement will come not simply from the application of existing technologies, but rather from the development of new technologies and practices suited to local conditions, and from the efforts to improve the efficiency with which technologies are operated. This last point is frequently overlooked, despite mounting evidence that much of the potential for improving energy efficiency or reducing resource use (in both North and South) comes from increased operating efficiency, routine maintenance, and relatively minor adaptations to existing plant and equipment.²

As a result, it is a mistake to reduce the debate over the linkages between technology and sustainable development to a much more narrowly-bounded discussion of North-South technology transfer. The debate must tackle not only the transfer of environmentally sound technologies, but rather the ways in which the entire vector of technological change (in both North and South) can be altered in the direction of greater environmental sustainability.

This in turn implies a need to address three separate sources of technological change: i) the generation of new knowledge through

² For an excellent review of the evidence, see Martin Bell, "Continuing Industrialisation, Climate Change and International Technology Transfer". Science Policy Research Unit, University of Sussex, December 1990.

basic and applied research, and the strengthening of local scientific infrastructure; ii) the diffusion or transfer of new technologies both within and across national boundaries, and their incorporation in productive activities; and, iii) the process of incremental improvements to production systems over time.

3) The Market for Environmentally Sound Technologies

Early research on North-South technology transfer underlined the importance of examining the nature of the market for technology, and further suggested that developing countries faced systematic disadvantages, both because of a lack of information on technological alternatives, and because of the dominance of large, oligopolistic firms as technology suppliers. More recent studies have qualified this finding somewhat, arguing that the international market for technology is more competitive than early assumed.

What sort of preliminary observations can we make regarding the 'market' for environmentally sound technologies facing developing countries?

As the points raised earlier make clear, a range of relevant technologies already exists. In the case of greenhouse warming, for example, these would include:

- technologies to limit the use of CFCs
- energy conservation technologies
- technologies to improve the efficiency of carbon-based energy production
- non-carbon energy technologies (wind, solar)
- agriculture and forest-related technologies, to improve energy efficiency, reduce methane emissions, reduce deforestation, and increase agricultural output per unit of land

While the range of available technologies is impressive, it is not exhaustive. In many cases technologies to meet specific developing country needs either do not exist, are in the early stages of development, or will require substantial adaptation. In other words, developing countries cannot simply pull the necessary technologies 'off the shelf'.

In addition, the market facing developing countries is extremely diverse. As a general rule, there appear to be a wide range of alternative technologies available, and a substantial diversity of potential suppliers, many of which are small and lack overseas experience. This may complicate problems of technology assessment and choice, and may also mean that some up-front financing will be necessary to allow small, inexperienced suppliers to overcome some of the initial costs of international technology transfer activities. But it also suggests a relatively competitive

market, in which developing countries should enjoy relatively strong bargaining power with suppliers.

The availability of off-the-shelf technologies, and the degree of concentration of supply, will vary widely among sectors and applications. Just as it is impossible to pre-define a comprehensive set of environmentally sound technologies, so our knowledge of the technology market will have to develop in a gradual, iterative fashion.

4) Technology Transfer and Technological Capabilities

The ultimate goal of any international action in the field of environmentally-sound technology should not be to apply particular technological solutions, but rather to enhance the capabilities of developing countries to select, import, assimilate, adapt and create the relevant technologies. In large measure, moreover, this is a matter of enhancing 'generic' technological capabilities rather than pursuing actions related specifically to environmental technologies. In the absence of sustained efforts to build such capabilities, transfer of novel technological systems may result in only limited and short-term improvements.³

Nonetheless, technology transfer is crucial to current discussions for three reasons.

In the first place, of all the disparities between North and South, the disparity in scientific and technological resources is most acute. No matter how much effort is made to develop local capacities in the developing countries in the medium term there will be continuing need for technology transfer. This is particularly true in the context of current environmental debates, where the challenges facing the international community are urgent and immediate.

Second, a commitment to increase the flow of environmentally sound technology may be an important means of countering some of the other trends at work in the international technology market. Problems of indebtedness and the shift of industrialized country investment away from developing countries have meant that commercial flows of technology from North to South have stagnated or declined over the past decade -- with the exception of flows to some of the newly-industrializing countries of East Asia. Cutbacks in aid appropriations have had similar effects on the flow of publicly-financed technology and technical assistance. At the same time, 'high-technology' sectors with potentially important roles in supplying environmentally sound technologies (biotechnology, advanced industrial materials) have been subject to strong trends toward the privatization of research, which has in turn reduced the

³ Ibid., p. 32.

flow of public domain technology in such fields. Finally, the growth of collaborative arrangements between Northern firms have accelerated the sharing of pre-commercial research, but in ways which have largely frozen out developing countries.

Third, technology transfer and innovation are not polar opposites. Earlier literature on North-South technology transfer (and the experience of countries such as South Korea) illustrate that technology imports can help to strengthen indigenous technological capabilities. But the link between technology imports and technological capabilities is by no means automatic, and depends crucially on the local policy and institutional context, and on the specific terms and conditions under which technology is transferred. As a result, concern with the economic and environmental efficiency of a given technological solution needs to be matched with a concern for its integration into the local productive structure, the conditions by which it is acquired, and the extent to which 'hardware' imports are accompanied by effective transfers of knowledge and capabilities.

5) Pursuing Areas of Mutual Interest

There are increasing indications that the perceived trade-off between protecting the environment and encouraging economic growth and development is not as rigid as often assumed, and that the application of environmentally sound technologies can also result in increases in economic efficiency. Reductions in pesticide use as a result of the introduction of bio-engineered plant varieties, waste reduction due to computerized control of manufacturing processes, or decreases in energy consumption due to miniaturization are all examples of such a process.⁴ It is not only through such radical innovations that economic and environmental objectives can be linked: in both industrialized and developing countries, incremental improvements to existing facilities can yield simultaneous economic and environmental benefits.

There is also growing recognition that technology transfer can yield benefits to suppliers far beyond the direct financial compensation involved in a given transaction:

- expansion of export opportunities for spare parts, auxiliary equipment, and related products or technology
- increased efficiency of the transfer process itself, as suppliers gradually learn to master the legal, managerial and technical challenges involved in successful transfer

⁴ See World Resources Institute, Transforming Technology: An Agenda for Environmentally Sustainable Growth in the 21st Century. Washington: World Resources Institute, 1991, pp. 1-3.

- enhanced competitive position of supplier firms vis-a-vis international competitors, particularly in cases where home markets are too small to permit economies of scale
- improving the productivity of input and component suppliers, as a result of the transfer of new generations of production technology
- two-way flows of knowledge, in which suppliers benefit from process or product adaptations pioneered by recipients.

Transfer of technology may thus play a role in enhancing the competitiveness of Canadian environmental industries, particularly in areas where Canada has an established reputation (remote sensing, for example, or waste-water management).

This does not mean that commercial advantage should be the key criteria in support to technology transfer. But it does suggest that there may be a Northern interest in such transfer quite apart from its contribution to resolving environmental problems. Initial attention should be directed toward exploring possible 'win-win-win' solutions -- that is, initiatives which meet the developmental needs of the Third World, the commercial needs of technology suppliers, and the environmental needs of the planetary ecosystem.

Such actions can help to increase the likelihood of longer-term, more comprehensive, and more costly measures -- both by demonstrating the potential for reversing environmental degradation, and by generating the income stream necessary to finance more far-reaching initiatives. Attention should be directed toward overcoming the barriers -- financial, informational and institutional -- to the realization of 'win-win-win' solutions.

III. Options for Action

The pages which follow set out some more concrete avenues for action, grouped around five broad objectives:

- clarifying the 'rules of the game' with regard to international cooperation in the transfer and development of environmentally sound technologies;
- increasing the supply of environmentally sound technologies from abroad;
- promoting the adoption and assimilation of imported technologies;
- improving needs assessment and technology choice; and,
- strengthening the innovative capabilities of developing

countries in the field of environmentally sound technology.

The options presented below are for the most part not dependent upon securing a comprehensive multilateral 'bargain' between North and South. Instead, they concentrate on finite, concrete actions which should form the content of any program (multilateral, bilateral or unilateral) to promote the transfer and development of environmentally sound technologies to developing countries -- and which should be pursued regardless of the success in securing a comprehensive multilateral agreement, or the precise form of that agreement. The options are thus directed not solely to the UNCED debates, but also, and perhaps more importantly, to the follow-up to the Conference.

The options also reflect a conviction that effective action must involve a number of different actors -- national governments, private sector firms, international institutions, etc. The costs of securing consensus among the various actors are likely to be prohibitive, and should not forestall immediate action by individual actors or smaller groups of actors. Indeed, there is considerable scope for developing new and innovative partnerships between a variety of actors -- NGOs, municipalities, professional associations -- in North and South. Moreover, the global environmental debate is still characterized by a considerable level of uncertainty, particularly regarding the Southern side of the equation -- itself a product of the unequal distribution of global scientific resources.⁵

Under conditions of such uncertainty, the most appropriate response is to hedge one's bets. While there may be efficiency losses because of insufficient coordination -- or even contradictory actions -- these are likely to be less important than the transaction costs of negotiating more broadly-based solutions, or the danger of investing too many resources in what may turn out to be a false lead. This suggests a 'two-track' approach, in which efforts to reach a broad consensus among the relevant actors (with regard to international conventions, for example) are balanced with more immediate and independent actions.

1) Clarifying the Rules of the Game

In the first instance, attention must be given to clarifying the 'rules of the game' -- the broad principles which should govern cooperation between North and South in their efforts to facilitate technology transfer and strengthen the technological capabilities of developing countries. The most important and contentious points are likely to be intellectual property rights and concessionality.

⁵ See, for example, Anil Agarwal, Global Warming in an Unequal World. New Delhi: Centre for Science and the Environment, 1991.

Canada should stake out a clear position on each of these issues, while at the same time searching for points of compromise between North and South.

The issue of intellectual property rights is perhaps the most intractable, bringing to the fore differing perspectives on the nature of scientific research, and the appropriate distribution of the benefits flowing from such research.

Canada should reaffirm its position that in the case of commercially-developed, proprietary technology, recognition of intellectual property rights is essential to the continued development of much-needed technologies. At the same time, however, Canada should resist pressures to force developing countries to unilaterally extend property rights into new and controversial areas, particularly regarding living organisms. Instead, support should be given to ongoing multilateral efforts to resolve this issue, and more generally to find a compromise between Northern and Southern positions on property rights.⁶

In any case, the fact that much of the relevant technology is not patent-protected means that failure to reach a comprehensive agreement on this issue need not stall actions on other fronts. More limited actions to transfer patent-protected technologies may also be possible (see below), and may be an important means of ensuring the flow of proprietary technologies in the short- to medium-term. Such actions may also serve as important 'confidence building measures', helping to overcome the mutual suspicion between North and South on this issue.

On the issue of concessionality, the challenge is to marry Northern concerns to recognize the commercial nature of most technology transfer, with Southern demands for favourable access. A compromise position is possible, resting on a distinction between the terms under which technology is purchased from a commercial supplier, and the terms under which financing is available to developing country purchasers. Canada should reaffirm that in the case of privately-owned technologies, market rates should form the basis for compensation to the owners of technology. On the other hand, developing countries should be provided with concessional financing in order to allow them to make such purchases, and should be assured that such financing would be additional to existing commitments for development assistance.

⁶ The progress which has been made in the past few years on the issue of 'farmers rights' suggests that what were once seen as intractable issues can in some cases be resolved. See Keystone Center, Final Consensus Report: Global Initiative for the Security and Sustainable Use of Plant Genetic Resources. Keystone, Colorado: The Keystone Center, 1991.

In essence, this is a recognition of the broader principle that Northern countries (as distinct from Northern technology suppliers) should shoulder the larger part of the burden of countering global environmental problems -- both by taking immediate action to reduce their own contributions, and by assisting developing countries to make the necessary adjustments. If developing countries are to compromise on the issues of concessionality and intellectual property rights, this sort of strong commitment by industrialized countries in the area of burden-sharing is essential.

Finally, it is essential to recognize that the imperfect nature of some segments of the technology market means that 'market rates' may be excessive, and may be accompanied by excessively restrictive conditions of transfers. Canada should press for renewed discussions on some form of code of conduct on technology transfer to guard against abuses of strong market positions.

2) Increasing the Supply of Technology from Abroad

A long-term response to the problem of technology flows to developing countries must deal with the structural factors which limit demand for imported technology in these countries, such as small effective market size, foreign exchange constraints, lack of infrastructure, and low levels of domestic investment. Ultimately, this must involve action to resolve the underlying problems (debt, protectionism, stagnant aid flows, ineffective macroeconomic stabilization) which limit both foreign and domestic investment.

There has been considerable discussion of the kind of multilateral fund required to promote increased technology flows. In light of the discussion above, Canada should support initiatives along the lines of the multilateral fund established under the Montreal Protocol, in which negotiations between technology suppliers and recipients are separated from the financing of developing country purchases. At the same time, however, Canada should ensure that developing country concerns about the governance of such institutions (e.g., the GEF) receive adequate attention.

Given the difficulty of reaching agreement on a comprehensive multilateral fund, attention should also be given to more limited steps which can be taken to increase the supply of technology. The appropriate actions depend crucially upon the type of technology in question: proprietary technologies; public domain technologies; 'emerging' technologies and pre-commercial research; and, 'soft' technologies or know-how.

In the case of proprietary technologies, intellectual property issues remain the most frequently mentioned barrier to transfer. As noted above, it is doubtful that any across-the-board agreement on IP issues can be reached at UNCED. Even in the absence of such an agreement, however, there may be considerable scope to increase

the transfer of certain types of proprietary technologies.

- in the first place, companies may be willing to transfer recently-developed technologies in cases where these do not represent part of their 'core' technological capabilities. In industries such as electronics and automobiles, the wide network of equipment and component suppliers involved (many without equity links) means that "sharing" technologies may be an essential part of a competitive strategy. One recent example is Northern Telecom's program to transfer a CFC-free component cleaning technology to electronics assembly operations in Mexico.

- second, there may be considerable scope for technology cooperation among non-competing users. This is the case, for example, with a newly formed network of utility companies in the United States, an experiment which deserves much closer examination.

- finally, there may be scope for the creation of specialized brokering services to mediate between the owners of proprietary technology and potential users in developing countries. One interesting example is a recently-created non-profit brokering service in the field of agricultural biotechnology, the International Service for the Acquisition of Agri-Biotechnology Applications (ISAAA), which has already mobilized proprietary technologies for application in Mexico and Southeast Asia.

For more widely available, public domain technologies, the barriers are likely to be less legal than informational, and to some degree financial. As will be discussed below, actions to improve the availability of information on technological alternatives, and on market opportunities, is essential. Barriers may be particularly high in the case of small, specialized firms with little or no international experience -- which are important in at least some segments of the market for environmental technologies. Canada should explore the possibility of creating a special fund to support the involvement of such firms in supplying environmentally sound technologies: possible mechanisms might include government funding of export development missions; improved provision of market information to less experienced suppliers; or, support to brokering services to match local technology needs with appropriate suppliers.

In the case of emerging technologies and pre-commercial research, much depends upon whether research is primarily based in the public or private sector. In the latter case, significant progress can be made by donor countries in funding research partnerships between developing countries and Northern researchers in university or public sector institutions. IDRC's cooperative research grants, involving Canadian and developing country

scientists, represent a key model in this regard. At a more ambitious level, multilateral efforts might be taken to fund pre-commercial research in specific areas, along the lines of the CGIAR system in the field of agricultural research (see below). In cases where basic and pre-commercial research has been largely or completely privatized, the barriers to transfer are much higher. Strategic partnerships in the fields of semiconductors, telecommunications and the like have in recent years begun to span national boundaries, facilitating the international flow of pre-commercial research, but this has not involved Southern countries. In the future, there may be scope for the participation of some Southern enterprises in such schemes, but the limited scientific capabilities of most Southern countries makes this a remote possibility at best.

Finally, in the area of 'soft' technologies and know-how, there are a wide variety of mechanisms to facilitate transfer. Such know-how tends to be fairly widely dispersed in most fields, although information on the availability of particular types of expertise is often poorly distributed. Twinning arrangements, involving long-term partnerships between Canadian and developing country institutions, may be particularly useful, and should be a priority candidate for development assistance funding; these may be particularly important in areas such as urban environmental problems, where a range of Canadian municipalities and professional associations have useful experience. This is also an area where there may be considerable scope for South-South transfers. In addition, action to reverse the South-North flow of trained professionals may be crucial in this area -- which ultimately depends on efforts to strengthen scientific research institutions in developing countries.

3) Promoting Adoption and Assimilation of Technologies

Barriers to adoption and assimilation of more environmentally sound technologies affect both imported and locally-developed technological solutions.

In the area of technology adoption, the key problem is the frequent lack of incentives for the application of more environmentally sound techniques; as a result, existing and readily available solutions, whether imported or locally-developed, may not be applied as widely as is desirable.

For the most part, recent debate has viewed this problem as one of 'market forces', focusing on distortions in factor prices (especially energy), on poorly developed capital markets, and on trade restrictions which militate against the import of

environmentally sound products and processes.⁷ Re-orienting prices to redress the most glaring problems (particularly regarding energy prices) is urgently required. This, for example, is the intent of carbon taxes on fossil fuels, or more general taxes on energy use: in both cases, taxation would force energy users to internalize the social and environmental costs of energy use, altering the relatively profitability of 'clean' technologies.

It is also increasingly being recognized, however, that market-based reforms on their own may be insufficient to alter prevailing patterns of technology use. In addition, a variety of non-market measures may be needed:

- more traditional 'command and control' type regulations may be essential in fields where market-based incentives do not function adequately (e.g., pollution standards to ensure water quality). Because of the technical and administrative requirements of regulatory action they should be used selectively, and one potentially important area of cooperation between North and South is in the design of regulatory systems appropriate to the conditions and administrative capabilities of individual developing countries;

- there may be important financial or technical bottlenecks to shifting to cleaner technologies -- for example, due to the up-front investment costs of switching to new process technology, or the need for ancillary technological expertise. In such cases, public sector financial assistance, or publicly-funded R&D, may play an important role;

- as a recent report by the UNCED Secretariat notes, developing country governments can also have a considerable effect on technology adoption by the reform of investment criteria for private sector investments, and by the judicious use of procurement provisions in public sector investment.⁸

Canada and other donor countries can assist developing countries in promoting technology adoption in a number of ways:

- financial and technical assistance for specific aspects of

⁷ See, for example, Touche Ross, Global Climate Change: The Role of Technology Transfer. A Report for the United Nations Conference on Environment and Development, financed by the U.K. Department of Trade and Industry and the Overseas Development Administration. London: Touche Ross, 1991.

⁸ United Nations General Assembly, Preparatory Committee for the United Nations Conference on the Environment and Development, Report on the Transfer of Technology. A/CONF.151/PC/52. 8 July 1991.

policy reform (regarding investment criteria, for example, or regulatory standards). One interesting example is Dalhousie University's project on Environmental Management Development in Indonesia (EMDI), which provides a range of advisory services to the Indonesian Ministry of State for Population and the Environment;

- funding of demonstration projects illustrating the technical and economic efficiency of environmentally-sound technologies might help to overcome some of the non-financial barriers to technology adoption;

- financial and technical assistance to promote technology-sharing arrangements among developing country firms, as a means of overcoming the high capital costs of many of the relevant technologies;

- assistance to improve the technical expertise of local and regional lending institutions in developing countries. Development banks and similar institutions play a key role in providing local funding for technology transfer projects (as well as providing assistance to local private sector R&D efforts in many cases). Yet such institutions frequently lack the necessary expertise to adequately assess the technical feasibility of investments.

Alongside technology adoption, attention must also be given to the assimilation of technologies. It is now widely accepted that ensuring effective use is at least as important as promoting the initial adoption of technologies. Research has established that considerable effort must be expended in order to reach the operating parameters of a given technology -- if, indeed, these are ever reached. And since imported technology is often inappropriate to domestic conditions, a series of minor or major adaptations may be required to allow such technologies to function effectively in developing country markets.

Assimilation of imported technology is dependent upon the broad conditions facing local firms: degree of local competition, trade, monetary and fiscal policy, and the availability of trained personnel. At the same time, however, there are a variety of more limited, concrete measures which can be undertaken:

- in the first place, the feasibility of effective assimilation is also determined by the conditions under which technology is transferred, particularly the provision of long-term training and technical assistance services by the technology supplier. Canada should ensure that effective assimilation of imported technology is an explicit objective of any initiatives in the field of environmentally sound technology transfer -- by building adequate training into ODA-funded projects, and by providing incentives to promote such

involvement by private sector suppliers. In cases where such long-term involvement is not feasible (e.g., small supplier firms without the capacity to mount such after-sales efforts) alternative sources of technical assistance could be supported;

- second, there is almost universal agreement that an adequate supply of trained human resources is essential to effectively assimilate new technology and engender ongoing performance improvements. As a result, attention should be given to both incentives for on-the-job training, and more effective training of engineers, scientists, and technicians;

- finally, the development of technological capabilities is often the result of idiosyncratic firm-level factors, usually related to the personality and interests of management. As a result, management training and demonstration projects may have a decisive effect on firms' technical effort.

4) Improving Needs Assessment and Technology Choice

Sound technology choice is the sine qua non of any strategy for international technology transfer. Unless developing countries are able to make informed choices among the various technological options open to them, efforts to promote international technology transfer risk becoming overwhelmingly supplier-driven, geared more to transferring available technological solutions than to responding to the needs of developing countries. Yet at the same time, developing countries typically face severe disadvantages in terms of the information available to them, and their technical capacities to assess needs and evaluate particular technologies.

In the first place, an adequate basis in 'the science of the environment' is crucial if developing countries are to make adequate assessments of their technological needs. As such, the acquisition by developing countries of relevant scientific knowledge regarding environmental issues should be seen as an essential counterpart to any action on technology transfer. Given the impossibility of defining universal standards of environmental 'soundness', needs assessments will have to be explicitly geared to particular sectors and geographic locations.

One possible point of entry in this area may be via the needs assessments which will have to be carried out as part of both the specific conventions signed at Rio, and the broader 'Agenda 21' document. If properly designed, country-level needs assessments can themselves be an effective way of building indigenous capabilities. The experience of the Montreal Protocol may offer important lessons in this regard. Under the Montreal process, industrialized countries volunteered to collaborate with one or more developing countries in undertaking joint needs assessments, subject to a common framework developed at a workshop of

participating countries. Canada should support the application of similar exercises in the follow-up to UNCED, and should give particular attention to the methodology to be used in such assessments.

Such exercises are at best one element in a strategy of building needs assessment capacity, however, and must be accompanied by longer-term efforts to strengthen indigenous scientific research institutions (see below). In addition, needs assessment should not be focused exclusively on identifying possible technological solutions. As decades of experience in supporting research for development have shown, a successful intervention must start by identifying the felt needs of the local population, in order to ensure that chosen solutions are effectively implemented. While inventories of potentially-useful technologies are urgently required, it is crucial that needs assessment exercises not assume that solutions will be technological.

In addition to needs assessment, there is a need for better access to information on the range of technological options available to developing countries, and the performance characteristics of given technologies. This is now widely recognized, and there are a number of inventories, information services, databases and the like either in operation or in the planning stage. Canada should support efforts to ensure more effective coordination of the various initiatives, either by the creation a single clearing house and information network on environmentally sound technologies (as suggested by the UNCED Secretariat) or (perhaps more fruitfully) by instituting more effective interchange among sector- and location-specific inventories.

Sound technology choice will probably be limited less by the insufficient provision of information, however, than by the insufficient capacity of recipient countries to use the information available. Careful thought needs to be given to the design and implementation of information systems to ensure that the appropriate clients are in fact reached, and that the appropriate tools are available to promote diffusion of the information within supplier countries. In addition, there may be considerable room for the involvement of intermediary institutions which perform a brokering service -- particularly in fields of rapid technological advance where formal information services may not capture all the relevant information, and where the capacity of developing countries to evaluate various technological options may be limited.

In addition to support for the design and implementation of information services, donor countries like Canada can fund training support and personnel exchanges, both on a government-to-government basis and within productive enterprises. There is also a need for the design of improved teaching materials, manuals, and assessment

criteria to permit the more effective evaluation of technology alternatives.

5) Strengthening Indigenous Innovative Capabilities

While a capability to assess and select imported technologies is important, an effective response to global environmental threats ultimately must allow developing countries not simply to access the 'pool' of world technology, but also to create their own technological solutions. As a result, there is a clear need for support to the structures and institutions which foster innovation in developing countries.

Two points should be made regarding the types of capacity-building efforts required. First, the past two decades have witnessed a shift in the locus of technological effort away from formal research institutions, and toward the productive unit; as a result, any strategy to improve the technological capabilities of developing countries must involve action at this level, as well as broader-based support to national and regional research institutes.

Second, it is now accepted that innovations result not so much from single institutions, but rather from networks of institutions. As a result, considerable emphasis should be placed on efforts to improve the capabilities of technology users and equipment suppliers -- which in industrialized countries are increasingly recognized as an important source of innovation. In addition, ongoing efforts to provide effective linkages between research institutions and technology users in productive sectors are crucial, and should be a key focus of donor efforts to strengthen local systems of innovation.

Canada can pursue a number of independent actions to strengthen developing countries' innovative capabilities, ranging from support to twinning programs, to enhanced scholarship support to developing country students, to the kind of research support provided by IDRC. Given the economies of scale associated with scientific research and the limited resources available to most developing countries, however, some form of collaborative effort in this area is essential.

In this regard, there are two broad avenues of action. The first stresses the creation of new international and regional institutions charged with the furthering of environmental science, technology and policy. There are, of course, advantages to such an approach -- particularly the ability to transcend the disciplinary boundaries of many existing institutions in order to attack the problems from a more integrated perspective. Any such effort must learn from the strengths and weaknesses of the other such initiatives -- such as the international agricultural research centres -- already in operation. Specifically, there is a need to have greater participation by developing country scientists, policy

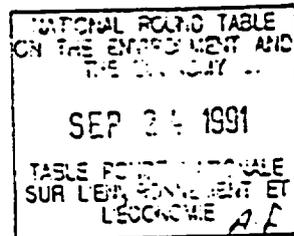
makers and users of the research results in these institutions than has often been the practice. Second, in a climate of severe resource constraints a new regional initiative is likely to be counterproductive, if it is at the expense of increasing the capacity of existing national institutions.

For this reason others argue for alternatives to the creation of new institutions. The UNCED Secretariat has proposed the establishment of regional capacity-building programs to support sustainable development in developing countries, which would not require the establishment of new central institutions, but would instead involve mechanisms for coordination and cooperation among existing institutions. While remaining open to the possibility of participating in new regional institutions, Canada should actively support the UNCED Secretariat proposal, bringing to bear its own experience (via IDRC and other institutions) in strengthening research networks in developing countries. Canada should also use its 'convening power' to bring diverse views and actors to the table, in order to discuss concrete avenues of action.

This sort of convening power should be exercised nationally as well as internationally. Efforts to strengthen the innovative capabilities of developing countries represent a key opportunity to broaden the basis of North-South dialogue on environmental issues, bringing to bear a more diverse set of views, and setting the stage for a variety of partnerships involving not only the federal government and its agencies, but also provincial governments, the private sector, the voluntary sector, and the academic community.



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MANAGING THE GLOBAL COMMONS: THE ECONOMIC SETTING
AND FINANCIAL OPTIONS

A Discussion Paper prepared for the
National Round Table on the Environment and the Economy

by Roy Culpeper, North-South Institute

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The author is grateful for comments from G.K. Helleiner, Sid Embree, and David Hilton. The views expressed, however, are those of the author.

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EXECUTIVE SUMMARY

1. Even as threats to the global ecology mount, the global economy is becoming more integrated. Most developing countries have little market power within the global economy. Monetary and fiscal policy in the large developed countries can have more impact than economic policy by individual developing countries. An example is the high interest rate regime of the 1980s which led to the debt crisis and outward net transfers from developing countries. Thus, sustainable development in the Third World can be considerably advanced or thwarted by the nature of economic policy in the North.
2. Aggregate net resource transfers to developing countries (new flows of capital less payments of interest and dividends) evaporated during the 1980s, undermining the basis for sustainable development. There seems little prospect for official development assistance, or private flows, to increase to most of the developing world during the 1990s to offset continuing outflows on account of debt servicing. Multilateral development banks may be the only channels remaining to expedite new capital flows, although their contribution to net transfers is much less.
3. Among the available financial options for sustainable development, debt and interest rate relief initiatives seem the most feasible. A one-fifth reduction in world interest rates would lead to a net increase in resource transfers by some \$13 billion annually and greatly reduce the remaining pressure of the debt overhang. Debt reduction initiatives by the commercial banks, official bilateral creditors and even multilateral creditors need urgently to be considered and implemented. Debt-for-nature swaps can play a useful part in promoting sustainable development, but cannot be relied upon to reduce the magnitude of the debt overhang.
4. A general sourcing fund could be a powerful vehicle for resource additionality for challenges such as climate change, maintaining biodiversity and managing tropical forests. Such a fund would also have allocative flexibility as between these competing needs. The Global Environment Facility which already exists as a joint initiative of the World Bank, UNDP and UNEP, should play a role as a general sourcing fund.

5. A system of internationally tradeable emissions permits should be considered to regulate world levels of greenhouse gas emissions and as a means of expediting resource transfers to developing countries. The system's effectiveness in meeting these objectives will depend crucially on how permits are distributed, on monitoring and implementation, and on other parameters.
6. National carbon taxes can play a role both by moving the prices of the primary greenhouse gas-producing activities closer to their true "ecological costs" as well as by generating potential resources for developing countries. Carbon taxes might be linked to a tradeable-permits system in order to effect the transfers, thereby generating the resources required by permit-buying (i.e., surplus carbon dioxide producing) developed countries.
7. The creation of new SDRs needs to be endorsed both as a means of generating liquidity for developing countries and as a means of truly internationalizing the world monetary system. The present system of dependence on the US dollar and a few other key reserve currencies is not only inequitable, it is also unstable. The SDR currently accounts for only four percent of global reserve assets. In order to reconstitute the SDR as the world's chief reserve asset, emissions must resume soon and on a substantial scale.

INTRODUCTION

The objective of this paper is to explore a number of options for financing sustainable development, including measures to combat global warming and to promote reforestation and the preservation of biological diversity. The UN Conference on Environment and Development (UNCED 1992), preparatory meetings thereto, and intergovernmental discussions of various conventions are oriented toward these broad objectives. The financing options are set against the backdrop of economic globalization, which underlies many of the pressures on the global ecology and also makes sub-global solutions problematic. They are also put in the context of current and projected resource transfers to developing countries, which have recently been negative. The organization of the paper is thus as follows. In the first section, global ecological issues are related to the trend toward economic globalization. Next, the size, direction and determinants of North-South resource transfers are discussed. Finally, some financial options to help transfer resources to developing countries are recommended.

GLOBAL ECONOMY VS. GLOVAL ECOLOGY

Today, the ecological interdependence of nations has become a commonplace. This interdependence is epitomized by the state of the planet's atmosphere. Deforestation in Brazil, Africa and Asia reduces the world's "carbon sinks". Rising fossil-fuel and CFC consumption in the North increases the accumulation of greenhouse gases. As a result, populations all over the planet are affected as the climate warms and the world's oceans expand.

Human activities, driven or influenced by economic motivations, generate these trends and their stresses on the global ecology. This much is uncontroversial. However, what is less appreciated is the relationship between growing ecological and increasing economic interdependence. The pressures on the environment are usually perceived to result from 150-odd national economies, operating and being managed autonomously, rather than from a global economic system beyond the control of any one country, but clearly dominated by the developed countries. Indeed, there is a striking parallel between economic and ecological interdependence. Rising interest rates and the 1981-83 recession in the industrial North did much to precipitate the Third World debt crisis. That crisis, in turn, undermined Canadian and American export markets in Latin America, and debtor country exports to the North. Some debtor countries tried to restore their balance by resorting to unsustainable development and export strategies.

It is thus useful to relate today's "global change" issues (global warming, ozone depletion, deforestation, decline of biodiversity) to the structure, management and evolution of the global economy. National boundaries are becoming increasingly permeable to trade and financial flows. The production process is frequently organized by transnational firms in several countries, and a rising proportion of international trade takes place within rather than between such firms. Similarly, the world's financial markets have become increasingly integrated over the last three decades as countries relaxed restrictions against capital movements. As a result, the value of international capital transactions now dwarfs that of merchandise transactions: the ratio of the two is at least 50:1.

This liberalized global economic order has evolved in large part because it has been actively promoted by policymakers in the industrial North -- and by organizations such as the OECD, the GATT, the IMF and the World Bank. The virtues of globalization are extolled and nation-states exhorted to sacrifice hitherto sovereign powers over trade, commerce and financial oversight. Indeed, the relevance of the nation-state as an entity which can effectively manage economic transactions within its own borders is becoming

more and more questionable. The disciplines of the global marketplace, we are told, will lead (via ever-increasing competition) to greater efficiency, productivity, output, and standards of living. Nation-states which obstruct these developments are said to be undermining their citizens' own material welfare. In contrast, the performance of the global economy as a system is seldom held up to the same scrutiny.

Hence, it is imperative to understand the contribution of global economic forces (particularly transnational corporations, but also global commodity and financial markets) to global ecological change. Without such an understanding, there is a danger that the world community will overlook global and preventative solutions, and instead pursue only remedial and damage-repair operations at the national and regional levels.

For example, global commodity markets have been depressed since 1980, and longer-term trends suggest that prices of many commodities exported by developing countries will have fallen by 50 percent in real terms over the half-century 1950-2000. Unfortunately, many countries (particularly in Africa) confronted by this grim prospect have little realistic choice other than to increase their production for export to maintain earnings levels. But the consequence of such action by several exporting countries will only be to put further downward pressure on prices. Development strategies which emphasize commodity exports may or may not have damaging ecological consequences, depending on the commodity and the method of its exploitation. So may development strategies which promote "food self-sufficiency" in an effort to escape the thralldom of world commodity markets, but result in unsustainable hillside cultivation or pressure on fragile soils. And these in turn may be local (e.g., soil erosion through over-intensive or inappropriate use) rather than global (harvesting of tropical timber). The point, however, is that such national strategies -- and by implication the viability of alternative, more sustainable development strategies -- cannot be viewed in isolation from the structure and functioning of world (i.e., Northern) markets.

Perhaps more germane to the subject of this paper, the globalization of financial markets also puts severe limitations on the scope of national policy. The magnitude of capital flight from countries such as Mexico, Argentina and Venezuela during the 1980s is said to have approximated or exceeded the level of external indebtedness. Debt servicing would doubtless have been much easier in these countries if capital flight had not occurred at those levels. The conventional explanation is that private investors had lost confidence in the local economy and sought a safer haven elsewhere. But it is questionable whether capital flight would have reached such proportions in the absence of increasingly integrated goods and financial markets. Equally important, the high interest rate regime ushered in by the OECD countries in the

1980s provided a powerful incentive to footloose short-term capital everywhere, including developing countries, to flee real capital formation in favour of monetary and financial instruments. The recent removal of withholding tax by Northern governments on interest payments to foreigners also increased the relative attraction of Northern financial paper to developing country investors. The monetary and fiscal policies of Northern countries, in other words, now have a profound effect on the international flow of capital, particularly to and from developing countries. This issue is considered further in the next section, and we also return to it in our list of financial options.

RESOURCE TRANSFERS AND DEVELOPMENT

Resource transfers between developing and industrial countries over the last decade illustrate the evolution of the global economic and financial order. The fact of the matter is that ostensibly large capital flows from North to South have not only stagnated during the 1980s, but they have also been largely offset by reflows of interest and profits from South to North. The resulting net transfers have either been puny, or in the wrong direction. This state of affairs profoundly affects both the circumstances of developing countries, and the attitudes of their governments, most of which are desperate for additional external capital to meet import and investment requirements. It is worth situating in some detail the resource requirements of developing countries against this background as they face the challenges both of global climate change and more localized ecological disasters.

During the 1980s there was a massive swing in aggregate net resource transfers between the developing countries and the rest of the world. (Aggregate net resource transfers to developing countries are defined as net movements of private and official capital, which are generally positive, plus net movements in interest, dividends and profits, which are generally negative. When the negative items outweigh the positive ones, as during most of the 1980s, there is a net outflow of resources.)

According to the World Bank, such aggregate net resource transfers amounted to a US\$37.1 billion inflow in 1980 (this and subsequent figures are stated in current US dollars). By 1987, these had become a \$16.7 billion outflow, indicating an adverse swing of almost \$54 billion against the developing countries. Underlying this shift was, on the one hand, a huge decline in net flows of capital to developing countries, particularly lending from the private commercial banks (which alone declined by some \$32 billion). And on the other, there was a \$21 billion increase in interest payments by developing countries.

There was some improvement in the two ensuing years: by 1989, net transfers had risen, but were still a marginally negative \$1 billion (i.e., there was a continuing net outflow of resources from the developing countries). Preliminary figures indicate that in 1990, net transfers turned positive again and reached \$8.8 billion, largely as a result of substantial increases in official bilateral and multilateral lending.

Underlying these trends, of course, was the Third World debt crisis. The sudden hike in interest rates to around the 20 percent

¹World Debt Tables, 1990-91, p. 126.

level by the USA in 1980 ensured first, that developing-country debt (much of it contracted at variable interest rates) was no longer entirely serviceable. And second, the ensuing recession in the North severely undercut LDC export earnings from which debt payments were made. Consequently, arrears on debt which were practically nonexistent in 1980 had accumulated to almost \$80 billion by 1989. Thus, it must be borne in mind that aggregate net resource transfers were negative despite non-payment of much of the debt. Full debt servicing would have made the net outflow much greater.

The debt crisis was induced partly by deliberate policy (high interest rates and an engineered recession to contain inflationary pressures in the wake of the second oil price shock in 1979) and partly by market forces (the decline of private bank lending due to their loss of confidence in the developing countries).

The crisis has gravely undermined "sustainable development", on any reasonable definition of that term. In the severely indebted countries, aggregate private consumption grew at an annual rate of only 1.8 percent in the 1980s; since population in those countries grew at 2.1 percent, living standards fell, in some cases from already abysmal levels. Even more serious (from the viewpoint of sustainability) was the fact that gross domestic investment fell in these countries at an average rate of 2.0 percent. In some countries, gross investment fell to levels inadequate to replace the capital stock. Falling investment levels reduce future output and productivity, and unless reversed, will accelerate the decline in per capita consumption and living standards.

However, the debt crisis has not presented a uniformly bleak picture across the Third World. In general, sub-Saharan Africa and Latin America have been the worst affected regions, while much of Asia (particularly east and southeast Asia) has escaped the ravages of indebtedness. These latter regions have been able to do so by reaching and sustaining impressive growth rates in their export sectors. Whether their performance is economically or ecologically sustainable or replicable by other developing countries remains an open question.

Looking to the future, aggregate net inflows of capital to the developing countries are projected to rise somewhat over the next few years, but in 1990 they still remained at considerably lower levels even than in 1986. Because the debt stock of developing countries will remain at levels in excess of \$1 trillion, steep interest payments (which were almost \$53 billion in 1990) will result in aggregate net resource transfers which will still only be slightly positive in 1995. The resource constraints are likely to be most severe in sub-Saharan Africa and Latin America.

It is useful to contrast the levels of official development assistance (ODA) from OECD countries and all donors, respectively,

with interest and dividends paid by developing countries during the 1980s. Payments of the latter have typically been at least double their aid receipts from OECD donors. It is clear, moreover, that despite nominal increases in ODA from OECD countries, in real terms ODA from all donors has remained flat at around \$52-55 billion (see Table).

TABLE
ODA RECEIPTS AND INTEREST AND DIVIDEND PAYMENTS OF LDCs

	<u>1983</u>	<u>1986</u>	<u>1989</u>
OECD ODA (Current \$billion)	33.9	44.4	51.3
TOTAL ODA (1988 \$billion)	51.1	54.8	51.8
Interest+dividends, gross (Current \$billion)	84.2	83.2	107.7

SOURCE: OECD, Financing and External Debt of Developing Countries 1989 Survey (Paris, 1990).

To sum up, any options to finance sustainable development must take into account the relatively marginal and recently negative aggregate net flow of resources to the Third World. Not only are developing countries' needs for additional resources desperate, their demands are many and competing. Resources are required for human resource development, infrastructure, agricultural investment, etc. as well as for environmental protection. Prioritization among these competing claims is difficult even if adequate resources were available. For many low-income countries, "sustainable development" may principally mean assuring the basic needs of the population and managing the local resource base, rather than allocating resources to arrest climate change. Furthermore, as urgent as the need to manage the global commons sustainably may be, it seems futile to expect additional financial transfers for this purpose on the scale proposed by some observers².

²For example, the World Resources Institute recently suggested that \$20 to \$50 billion per annum will be needed over the next decade to meet developing countries' conservation requirements (WRI, Natural Endowments: Financing Resource Conservation for Development, 1989, p.ix). These magnitudes are equal to 40 to 100 percent of current DAC aid flows. Meanwhile, the World Institute for Development Economics Research (WIDER) has called for the doubling of aid flows simply to ensure a socially necessary minimum in developing-country living standards.

In any case there are obviously severe financial constraints on additional resource mobilization. There is little reason to look to official development assistance as a source of large additional resources. ODA from the OECD countries has been growing at about 2 percent annually for the last decade, and is not projected to change. The weighted ODA/GNP ratio for the OECD/DAC donors has been stuck at about 0.35 percent for several years and there is little evidence of a movement toward the UN target of 0.7 percent. These ratios indicate that aid flows would double if OECD countries increased their efforts and, on average, met the UN target. Unfortunately, countries with growing aid programs (Japan, France, Italy) are offset by countries with shrinking ones (USA, UK, Canada). Fiscal constraints seem everywhere to be a limiting factor for aid budgets, in a world where, because of global economic integration, tax and revenue generation must be "competitive" (i.e., relatively low) in order to reduce capital flight and attract investment.

One possible exception to the otherwise gloomy outlook for resource flows is the multilateral development banks (MDBs). These agencies are able to borrow in the private capital markets and lend to developing countries on terms most could never obtain on their own. Thus the MDBs, which comprise the World Bank, the African Development Bank, the Asian Development Bank, and the Inter-American Development Bank, act as conduits for private capital at a time when private lenders and investors have largely turned their backs on the Third World. However, while the MDBs can act to keep up net flows to developing countries, their net transfers are likely to be lower because of substantial interest payments by borrowers on MDB loans.

FINANCIAL OPTIONS FOR SUSTAINABLE DEVELOPMENT

Several ideas have been propounded over the last few years to facilitate North-to-South resource transfers to combat global warming, promote reforestation, and preserve biodiversity. Some proposals are materializing, for example the Global Environment Facility and the ozone protection trust fund. Others, such as carbon taxes and tradable emissions permits, need to be considered further and would require that new juridical and enforcement mechanisms (to collect taxes and levy fines) be put in place. Since such mechanisms would by nature be supra-national, there would be considerable political hurdles to clear in their creation and operation.

Such proposals have two objectives. The first is to arrest and possibly reverse the causes of global change -- for example, by limiting and then reducing the emission of greenhouse gases, particularly carbon dioxide. The second is provide resources to developing countries, in order to finance sustainable development.

A critical examination of the feasibility of the first objective (e.g., whether it is even possible to limit or reduce GSG emissions) is crucial, but lies outside the purview of this paper. And it is important to appreciate that the second of these two objectives generally means something different to the North and the South. Developed countries think of "sustainable development" in the global context, and hence they regard resource transfers as a way of reducing the contribution of developing countries to greenhouse gases.

Developing countries recognize the threat of global warming, but tend to think of sustainability in a much more localized, and development-oriented context. Thus they seek external assistance to help manage their natural resource base, by reducing environmental stresses on soils, freshwater, and so on, which are in turn due to poverty and overpopulation. In some cases, for example forest management and preservation, the Southern and Northern agendas may converge. However, the South looks primarily to the North to combat global climate change, on the grounds that the cumulative stresses on the global ecology are due largely to the developed countries -- which is an irrefutable fact. (The Southern point of view was recently articulated by 40 developing-country ministers in the Beijing Declaration in June.)

The view advanced here is that, if meaningful progress is to be expected from UNCED, developed countries need to be sensitive to the developing-country perspective, and be prepared to transfer resources for environmental and development objectives which are very specific to the local context, rather than tie them to global change issues.

In this section, we do not begin with an estimate or target of total "needs", rather, only with the assumption that these needs may be unattainably high, as estimated by WRI and WIDER. However, in surveying the various financial mechanisms which are likely to be considered at UNCED it is useful to define criteria by which alternatives may be judged. Three seem compelling. The first such criterion is that of potential for additionality in resource transfers. This follows both from the magnitude of the needs and the constraints on new resource flows.

The second criterion follows from the fact that the more complex and "institutional" (in the sense of creating new organizations) the mechanism, the more difficult will be the political negotiations leading to its creation. Thus, our second criterion is ease of negotiation.

The final criterion follows from the plethora of competing needs for additional resources, both at the level of global change issues (ozone, greenhouse gases, tropical forests, biodiversity), and at the level of developing-country requirements (poverty alleviation, other more "conventional" development needs, local environmental management). Funding mechanisms which are more easily able to allocate resources among these needs are obviously preferable to those which are rigidly dedicated to specific purposes. They might also be easier to negotiate. Thus, the third criterion is allocative flexibility.

With the above objectives and criteria in mind, we consider the following options for resource transfers, more or less in descending order of potential, to be the most promising.

1. Debt and Interest Rate Relief Initiatives

There are several possibilities under this heading. They all meet the three criteria to a greater degree than alternatives. First, there is scope for great additionality. Of interest and dividend payments of \$107 billion in 1989 (see Table), some \$65 billion was on account of long- and short-term interest plus IMF charges. If these interest charges were reduced by only one-fifth, this would result in a swing of \$13 billion in favour of the developing-country debtors. Such an increase in net resource inflows corresponds to a 25 percent increase in current ODA levels. Second, debt reduction is relatively easy to negotiate, particularly if it is "untied". Thirdly, untied debt relief has great allocative flexibility: payments otherwise made to service debt can be used for other purposes, according to the debtor-country's priorities.

"Untied" debt relief refers to concessions on contractual obligations, without any strings or conditionality attached. Some

may feel debt concessions present an opportunity for leverage over the debtor -- for example, by requiring certain steps to be taken with regard to managing the natural resource base. (Debt relief could be given on condition that forest-clearing activities stop. Debt-for-nature swaps represent "tied" debt relief in this sense.) The problem with trying to tie debt relief to certain environmental or development programs is that it adds to the negotiating burden, for both sides. Also, there is inherently less leverage through debt relief than through additional funding, since debtors always have the option of default.

On the other hand, it is clear that debt relief will benefit the debt-distressed regions far more than other parts of the Third World, i.e., sub-Saharan Africa and Latin America more than east and southeast Asia. Hence this is not a good vehicle for targeting additional resources to China or India, although the scope for debt relief in India has intensified over the past couple of years.

Debt-Reduction Initiatives. When the Brady Initiative was launched in March 1989, the principle of reducing commercial bank claims on developing countries was accepted by the leading creditor countries. The relative extent of debt reduction in the first four countries (Philippines, Mexico, Costa Rica, Venezuela) ranged between 4.5 percent of total debt (in the case of the Philippines) and 31 percent (Costa Rica).³ A few other countries may be expected to benefit from the Brady Plan. However, the Brady Plan has run into a major roadblock with countries such as Brazil, Argentina, and Peru, which have collectively accumulated arrears of well over \$15 billion. It seems very probable that the required debt reduction -- i.e., the losses suffered by the commercial banks -- will be much greater than in the first few clients of the Brady Plan. Fortunately, Northern banks, with perhaps a few exceptions, are not nearly so vulnerable to losses on their Third World assets as they were a few years ago, because of substantial loan loss provisioning.

Indeed, analysis of the Canadian banks' balance sheets in early 1991 suggested that they would actually profit by selling their Third World loans at current secondary-market prices.⁴ Hence a real opportunity exists for some mutually beneficial commercial bank debt-reduction deals in the near future. Since private banks still account for almost one-half of the total \$1.3 trillion Third World debt, and \$50 billion in actual debt-service payments in 1989, there is potentially large scope for resource transfers in this quarter. Ways of encouraging banks to sell their loans at

³Computed from Table 11 in World Bank, World Debt Tables 1990-91, Vol. 1 Analysis and Summary Tables (Washington 1990), p.33.

⁴See Levesque Beaubien Geoffrion, Canadian Banking Reference, January 21, 1991.

deep discounts to debtor countries, or of engaging in other debt reduction operations, need urgently to be considered.⁵

At the 1988 G-7 Summit held in Toronto, an agreement was reached to reduce official bilateral debt (predominantly export credits) on the low-income countries, particularly in Africa. Subsequently, so-called "Toronto terms", which involved a reduction of interest by up to 3.5 percentage points or a cancellation of one-third of principal, on small slices of debt, were implemented through the Paris Club rescheduling process. Repeated application of Toronto terms would reduce debt servicing by about 15 percent by the year 2000.⁶

Toronto terms resulted in 1990 in a reduction of about 1.5 percent of scheduled debt service in 19 beneficiary countries. In addition, there have been a series of cancellations of ODA (concessional) debt going back to 1978 amounting to \$5.73 billion; in Canada's case, some C\$1.15 billion in ODA debt has been or will be forgiven. However, because of the soft terms of ODA debt, which often is interest-free, this apparently sizable amount has only reduced scheduled debt service by about 5 percent in 1990.

Finally, the Bush Administration announced in 1990 its "Enterprise for the Americas" initiative, under which some \$12 billion of US bilateral credits (including nonconcessional credits) to Latin American and Caribbean debtors are eligible for reduction. Some of this debt may be used for debt-for-nature swaps. Other bilateral creditors, including Canada, should be encouraged to follow suit. However, bilateral debt servicing only absorbs 10 percent of the LAC region's total debt service payments. Since the US portion accounts for 20 percent of the region's bilateral debt, even if the entire stock of US bilateral credits were cancelled, debt service payments would fall by only about 2 percent. Moreover, the US plan is highly conditional, requiring debtors to undertake certain economic reforms, some of which go beyond standard IMF/World Bank adjustment measures, and are controversial if not downright questionable.

What the foregoing suggests is that current initiatives are not adequate. If the volume of resource transfers to the South is to be substantially elevated, then much deeper debt reduction is required. Indeed, some steps in this direction have already been undertaken. Earlier this year, Poland and Egypt obtained

⁵See Securing our Global Future: Canada's Stake in the Unfinished Business of Third World Debt, Report of the House of Commons Standing Committee on External Affairs and International Trade (June 1990), Appendix p. 51, for a proposal to encourage banks to behave in the desired way by using the tax system.

⁶World Debt Tables 1990-91, Vol. 1, p. 94.

rescheduling terms which will reduce their bilateral debts by 50 percent over a three-year period, compared to 20 percent under repeated Toronto terms rescheduling. There is also continuing discussion about proposals launched in 1990 by then UK Chancellor John Major and Dutch Aid Minister Jan Pronk. These would lead, respectively, to the forgiveness of two-thirds of the debt stock and its outright cancellation (the latter only for the least developed countries).

Unfortunately, talks on these proposals by Paris Club creditors have become bogged down due mostly to American reluctance to view the Polish deal as a "precedent": As a result, official bilateral reduction initiatives are now referred to as "enhanced Toronto terms", will probably be less generous than the Pronk or even the Major proposal, and are likely to proceed on an ad hoc, case-by-case basis.

Finally, the hardest debt of all to relieve is that of the multilateral institutions -- the IMF, the World Bank, and the regional development banks. To date, even while encouraging other creditors to suffer losses through partial debt forgiveness, these organizations have been hostile to the idea of reducing their own claims on debtor countries. They have even opposed far less draconian relief measures such as rescheduling of principal, which conventional accounting does not show as a loss. Their grounds for opposition are that as they are the lenders of last resort, they must maintain lending standards or themselves face financial straits. In the case of the multilateral development banks, they also claim a potential deterioration in credit rating, leading to higher costs of capital and ultimately to a higher cost of borrowing for developing-country clients. However, it is becoming increasingly apparent that in certain debtor countries such as Peru, the multilateral creditors have no choice but to engage in debt relief, at least through what amounts to rescheduling. And far from damaging their credit ratings, these concessions will be seen as strengthening their balance-sheets.

Canada's Position. In June 1990 the Standing Committee on External Affairs and International Trade tabled a forward-looking report on Third World debt in the House of Commons.⁷ It was supported by all three parties and contained many recommendations to the government. Included was a proposal to modify the tax system so as to encourage banks to engage in debt-reduction transactions. Virtually none of these were accepted by the government in its response tabled in November 1990, except for some actions which it said Canada was already undertaking. While Canada has in some respects led the way in debt forgiveness initiatives, as indicated above these have been limited to "soft" debt (i.e., ODA debts carrying low or zero

⁷Securing our Global Future: Canada's Stake in the Unfinished Business of Third World Debt.

interest), which has had little effect on net resource transfers. On "harder" debt (commercial bank and nonconcessional official debt), Canada has tended to stand behind the more rigid positions of its G7 allies, particularly the United States.

Debt-for-Nature Swaps. Prior to the recent Polish debt rescheduling, some \$100 million in debt-for-nature swaps had been transacted in seven countries (Bolivia, Costa Rica, Ecuador, Philippines, Zambia, Madagascar, and Dominican Republic) and a further \$500 million were being planned in Argentina, Brazil, Paraguay, and Panama.⁸ The Polish deal alone could add some \$3.3 billion to this total. It is clear that these amounts do little to reduce the overhang of \$700 billion in the severely-indebted countries. Thus, their contribution to net resource additionality is marginal. Moreover, swaps in general (including debt-equity swaps) are tricky and time-consuming to negotiate, involving the original creditor (typically a bank), a sales intermediary (an investment broker), a purchaser (a Northern environment NGO), and at least three parties in the debtor country (the central bank, a government department or two, and a local NGO). Finally, since the purpose of the swap is carefully defined in the transaction (typically to conserve natural resources), there is little allocative flexibility.

Nonetheless, such swaps can play an important role in assisting local conservation, resource management, and capacity-building efforts in the developing country recipient, adding significantly to environmental protection budgets. It is possible that some \$200 million in new transactions can be achieved each year. Official bilateral creditors (through the Paris Club, and the Enterprise for the Americas Initiative) have now joined the queue as potential originators of debt-for-nature swaps.

Recommendations. At UNCED, Canada should be prepared to entertain far deeper concessions on Third World debt than it has hitherto supported through the G7 and its OECD allies. The world financial system is no longer at risk from this source -- in fact, most of the banking sector, certainly in Canada, has emerged safely and completely from the debt crisis. Canada should recognize this by accepting the need for bolder debt-reduction initiatives, on commercial bank debt, official bilateral and multilateral debt, than are currently accepted by the G7. UNCED also provides an opportunity to widen the dialogue on debt to include the developing countries, which are excluded from the G7 and the Paris Club (except as supplicants), the two fora which have contrived the current "debt strategy". Part of this openness to further debt relief could materialize as support for more debt-for-nature swaps,

⁸Jens Rosebrock and Harald Sondhof, "Debt-for-Nature Swaps: a Review of the First Experiences," Intereconomics, March/April 1991.

but it would be a mistake to rely on this vehicle alone, for the reasons suggested above. The objective should be to reduce the burden of the debt overhang as quickly as possible, both to effect a North-to-South net resource transfer and to release scarce or overtaxed Southern managerial resources dedicated to chronic rescheduling negotiations.

Canada should also recognize the need for lower interest rates internationally. Throughout the OECD countries, there has been an over-reliance on the monetary policy instrument in the macroeconomic battle against inflation over the past 12 years. The result has been unprecedentedly high interest rates, which have abetted capital flight from developing countries, undermined their economic growth, and are still central to the continuing debt crisis. As mentioned above, a one-fifth reduction in interest rates (about 2 percentage points, reducing real interest rates to historical levels of about 3 percent) would lead to a net swing in resource transfers of about \$13 billion. It would also (according to the World Bank) increase the economic growth rate of developing countries by some 0.4 percent.

2. Establishment of the GEF as a "General Sourcing Fund"

The Global Environment Facility was established under the aegis of the World Bank, UNEP and the UNDP in November 1990, as a pilot program to fund environment projects in developing countries in the area of ozone protection, climate change, forestry, biodiversity and marine environment. The facility is based on voluntary contributions to a core fund, or in associated cofinancing of GEF projects. A funding target of \$1.4 billion was established; over \$1 billion of this amount has already been committed. To join the GEF requires a minimum contribution of SDR 4 million, or about US\$5.4 million. Fifteen investment projects with a combined estimated cost of \$214 million are slated for approval through the end of calendar 1991. Projects are based throughout the developing world; eleven are concerned with biodiversity, three with global warming and one with international waters pollution. In addition eleven technical assistance projects amounting to \$59 million are planned for 1991.

The GEF has also taken on a trusteeship role for the Ozone Protection Fund of \$240 million established by the Montreal Protocol in 1990. However, an independent steering committee of representatives from seven developed and seven developing countries determines the priorities and project allocations of the Ozone Fund. But by encouraging signatories of the Montreal Protocol Multilateral Fund to allow their contributions to be counted as well as contributions to the GEF, the GEF has already assumed an "umbrella structure" for funding global environment initiatives.

Meanwhile, the GEF is rapidly establishing a track record on projects concerned with biodiversity, global warming, international marine pollution, and technical assistance to developing countries. Moreover, GEF is actively working with NGOs in identifying, reviewing and preparing projects, and is anticipating their involvement in implementing and evaluating projects as they come on stream. Using existing administrative structures and staff resources at the UNDP and UNEP as well as the World Bank, the economy and expeditiousness with which the GEF has evolved to date must be regarded as impressive.

It has been suggested that the GEF can play the role of a general "sourcing" fund to mobilize funds from various sources and dispense them according to the requirements of particular conventions (climate change, biodiversity, forests) as they become effective. Granted, this is a "mechanism" rather than a "new and innovative source" of funding for sustainable development. But it could be viewed as an end in itself, since it potentially satisfies our three selection criteria for funding options. First, a well-organized sourcing mechanism can be a powerful vehicle for resource additionality: a single, well-managed fund might be able to mobilize more resources through occasional replenishments than several individual funds, and there would be administrative economies. Second, there would obviously be allocative flexibility, since funds mobilized would be disbursed for various conventions, as well as for purposes not yet covered by a convention. Moreover, the conventions being discussed are highly complementary -- the management of tropical forests has a bearing on both climate change and biodiversity. This suggests a unified rather than a segmented approach to funding. And third, as to ease of negotiation, this must be viewed in a relative context: it may be easier to negotiate one fund for several conventions than several funds, one for each convention (as in the case of the ozone protection fund).

Having said this, it is clear that many pitfalls await the GEF on the road to becoming a general sourcing fund. The most serious of these relate to the governance of the GEF. Both its internal decision-making structure, which in important respects relies upon the existing World Bank Executive Board, as well as its relationship to additional environmental conventions and protocols for which it becomes administratively responsible, need to be worked out. In particular, the criteria on which funds are allocated among various conventions must be specified: this is the "allocative" issue. (The existing relationship with the Ozone Protection Fund is not an appropriate model, since that fund was negotiated independently, a situation which a "sourcing" fund strategy would purposely avoid.) In addition, there is a "burden sharing" issue (the relative share of individual countries, and the relative share of developed and developing countries as groups) and a "power sharing" issue (whether weighted voting prevails, World Bank style, or UN voting procedures). Obviously these three issues are intimately related.

Canadian Position. Canada has been unusually tardy in joining the GEF -- it is the only member of the G7 not to have formally announced a contribution to the core facility to date. Moreover, the contribution under consideration (around C\$25 million) is about one-third of Canada's typical share (around 5 percent of GEF's US\$1.4 billion core and cofinanced funding, or C\$80 million). Tardiness may reflect poor interdepartmental co-ordination (funds would come from Environment Canada and CIDA) while the meagre contribution is related to overall fiscal restraint. Nonetheless, the net impact suggests less than an enthusiastic stance on the GEF, as presently constituted. This does not put Canada in an especially strong position to espouse an active and expanding role for the GEF.

Recommendation. The GEF already exists, compared to the Planetary Protection Fund proposed by Rajiv Gandhi and Mrs. Brundtland, or the Green Fund proposed in the Beijing Declaration. Developed countries are disposed not to create new institutions, and the GEF has deftly utilized available staff resources and the existing institutional infrastructure of the World Bank, UNDP and UNEP. Canada could turn its hesitancy in joining the GEF to its advantage by supporting those developing countries apprehensive about the governance issues facing the facility. The government should, however, be prepared to increase its contribution to the GEF threefold, to signal its commitment. Furthermore, the resolution of those issues and the transformation of the GEF into a general sourcing fund will take considerable negotiation. Canada should be prepared to commit some negotiating capital to this enterprise before and possibly after UNCED.

3. Tradeable Emissions Permits

A system of tradeable emissions permits brings market forces to bear upon atmospheric polluters. Permits which total the ceiling level or desired amount of emissions are distributed to participants in the system (who in some way are responsible for emissions). Participants have the right to emit up to the level allowed by their permits. Trade between participants allows those emitting in excess of their permit levels to purchase emission rights from those below their allowable levels. The price at which permits are exchanged will be between the cost to the purchaser of reducing emissions to allowable levels, and the foregone benefits to the vendor of not utilizing its allowable emission limits. There will be a resource transfer from excess to deficient emitters. If the price lies outside this range, excess emitters will have an economic incentive to reduce their emissions down to permissible levels (the cost of pollution is "internalized"), or deficient emitters will have an incentive to increase their emissions, but only up to the allowable limit. In this case there will be no trade in permits, and no resource transfer but in either case the total amount of emissions should fall below the overall ceiling. If the participants are countries, a system of tradeable emissions permits seems to lend itself to the containment of

greenhouse gases, by encouraging the price system better to reflect externalities. It could also effect a resource transfer to those countries which are not yet large GHG emitters, i.e., most developing countries.

Until now, however, such systems have only been introduced into a national or sub-national setting, particularly in the United States. There the market in emission rights has become highly articulated: the Chicago Board of Trade is now organizing futures trading in such rights. Markets can perform useful functions by decentralizing consumption and production decisions and bringing economic choices into greater harmony with ecological imperatives. But marketable emission rights only reduce; they do not replace, the regulatory role of government(s), as American experience illustrates in a domestic context.

In fact, governments have a crucial role in setting up the system and overseeing its operation. The establishment of global GHG ceilings -- total allowable emission level -- and the initial distribution of permits among participants will have a direct impact on permit price levels, resource flows and the distribution of costs and benefits. So will the rules of trading. The periodicity of the system is also critical: will permits expire after one, five, or ten years? Once established, a monitoring and enforcement authority will be required to ensure that participants do not cheat. An international authority would require inspection and verification privileges as well as the power to impose fines or other sanctions.

There are also a host of technical design issues to settle. Will all GHGs (carbon dioxide, methane, CFCs, nitrogen/nitrous oxides etc.) be included in the scheme, and if so will rights be tradeable among them? Will allowances be given for "carbon sinks", particularly forests? If so will these operate on the basis of existing endowments (countries with large forest cover would have higher permits) or at the margin (reforestation would earn additional permits, while deforestation would take them away)? Will permits only be issued to states, or would private firms also be eligible permit-holders? Most important of all, will such a scheme succeed in containing the buildup of GHGs in the atmosphere, let alone reducing them?

In terms of our three selection criteria for funding options, it is obvious from these considerations that ease of negotiation does not characterize a tradeable emission permit system. However, some developing country experts have expressed enthusiasm about this option, which is also much favoured by private sector experts in the North. Hence there is scope for bargaining, even though negotiations might be difficult. In any case, a permit system should be compared to alternatives, which may be equally difficult to negotiate but lack its advantages.

With regard to North to South resource flow additionality and allocative flexibility, a permit system has obvious advantages over

a system relying completely on regulatory limits (which would, incidentally, encounter the same monitoring and enforcement challenges). Indeed, a completely regulatory system would have no inherent resource-transfer mechanism at all, and would likely have to be associated with parallel technology-transfer and project-funding initiatives to be acceptable to many developing countries. Moreover, resources received in permit trading would be untied, and useable for general development purposes.

By way of example, one recent tradeable permit proposal would generate a resource transfer of some \$30 billion annually to 20 developing countries (of which \$11.3 billion would go to China, and \$8.3 billion to India).⁹ Of course, such calculations are highly dependent on the assumptions underlying the proposal: in this case, permits would be distributed to countries on the basis of population, and the price of a permit is arbitrarily fixed at \$15 per 1,000 tonnes of carbon emissions. The fact that such calculations are being made by developing countries is, nonetheless important. On the other hand, permit systems could be quite expensive for industrial countries. Another calculation (this one by Northern experts) suggests a one-year expenditure by the year 2020 of around \$45 billion by the U.S. to import emission rights.¹⁰ There are ample grounds for scepticism that Northern countries will abide by such rules. After all, the same countries are balking at increasing, or even maintaining aid flows to developing countries. Thus, a system would have to be devised which generates a high level of political commitment among the governments of Northern countries.

Recommendation. Canada should encourage further consideration of a tradeable emissions permit system, which could be established eventually in a climate change convention. Obviously, further research is required on how such a system should best work if operated on a global scale. In the interim, and if no agreement is reached on such a system within the climate change convention, perhaps some pilot programs could be run on an experimental basis involving bilateral arrangements between developed and developing countries, or groups of such countries.

⁹Anil Agarwal and Sunita Narain, Global Warming in an Unequal World (Delhi: Centre for Science and Environment, January 1991), pp. 20-21.

¹⁰Alan S. Manne and Richard G. Richels, "International Trade in Carbon Emission Rights: a Decomposition Procedure," American Economic Review vol.81, no.2 (May 1991), p.138.

4. Carbon Taxes

Taxes on the production or consumption of carbon dioxide-producing fossil fuels would both increase the price of the largest source of GHGs, as well as generating potentially large revenues which may be used for the purpose of resource transfers to developing countries. Thus carbon taxes could simultaneously contribute to the stability of the global environment by helping contain the level of carbon dioxide emissions, and to global development by considerably adding to resource transfers. One expert has estimated that taxes of 100 percent would be necessary on the requisite base. If collected by an international agency and redistributed to developing countries some \$150 billion per annum could be generated, at least three times current aid flows.

Potential for additional resource transfers is clearly quite large. Allocative flexibility would also be a feature of a global carbon tax scheme, unless the net taxpayers (Northern countries) insisted that recipients could use funds for specified purposes only.

The big drawback, of course, is ease of negotiation. A carbon tax would be even more difficult to negotiate than a tradeable emissions permit system. The establishment of a supranational authority to assess and levy taxes on rich countries and transfer them to the poor may have a place in a utopian future for the planet, but is bound to be stoutly resisted by developed countries for the foreseeable future. In contrast, a permit system has many more degrees of freedom for participants and is inherently more restrictive in its application.

A second-best proposal would be to encourage all countries to adopt carbon taxes in their national revenue systems on as equal a basis as possible. Revenues generated by the tax would be used by each country as it sees fit. It is difficult to say what such a system would generate in the way of additional resource transfers for development, but it would be far less than a system designed and operated with resource transfers as one of its main objectives. If the tax generation potential is as high as some observers suggest, there is scope for large revenue windfalls. On the other hand, there is the danger of revolt among Northern taxpayers, so there would likely be offsetting tax reductions. Also, deficit reduction and other expenditure priorities would compete for the proceeds with development assistance.

One idea would be to urge national governments to implement a carbon tax at the same time as a tradeable emissions permit system is launched. Revenues generated in developed countries could be set off against current or anticipated expenditures incurred in purchasing permits from developing countries. In this manner, the economic incentive to the permit-buying country to reduce GHG emissions would be transmitted directly to the consumer

in the form of higher costs of carbon dioxide producing activities or products. If the costs of a tradeable permit system are thus passed through to consumers, the burden on governments to generate resources will be commensurately reduced, and so perhaps will political opposition to the idea.

Recommendation. Canada should examine, and urge other countries to consider, the co-ordinated adoption of carbon taxes on a national basis. Part of such an examination might involve possible links to a tradeable emissions permit system.

5. SDR Emissions

Emission of SDRs. Since its creation in 1969, there have been several proposals to link the emission of additional special drawing rights to development purposes. None have garnered much support outside the developing countries. There are many difficulties associated with the general "SDR-Aid Link" proposal (or its latter-day variant, which would link SDRs to environment purposes). One is that SDRs are initially allocated according to IMF quotas, so that the biggest recipients would be the large industrial countries. Some way of bending the allocation rules would be required, which might need an amendment to the IMF Articles; or the current system could be retained and developed countries would simply "donate" their SDRs to developing countries.

In any case, SDRs are a mixed blessing for net resource transfers since users of SDRs (i.e., countries holding less than their normal SDR quotas) would pay interest to recipients (countries holding more than their normal SDR quotas). Since SDRs carry a market rate of interest these transfers would not qualify as ODA (which has a grant element of 25 percent), unless there was an accompanying interest subsidy.

Perhaps the biggest drawback of all stems not from the "Link" as such, but from the loss of enthusiasm by the leading industrial powers for the SDR itself. Today it still accounts for only 4 percent of world reserves. There has been no emission agreed to over the last ten years, principally because of opposition by the USA, Germany and Japan. (In 1984 Canada shifted its position from support of new SDR emissions to opposition). Twenty years after its creation, the SDR still seems remote from its original objective, which was eventually to become the world's principal reserve asset.

The reasons for a change of heart in the North are not hard to find. The official reason for developed-country resistance to further SDR emissions is that the "world is awash with liquidity", as reflected in official reserve levels. If this is true, it is because of the chronic payments deficits run by the USA, which have added significantly to dollar holdings in official reserves around

the world. Of course, this system is tremendously advantageous to the United States. No other country can simply finance its balance of payments by issuing its domestic currency.

Yet, the international monetary system is vulnerable precisely because of this dependence on the US dollar. Accelerating US foreign indebtedness and mounting dollar liabilities undermine confidence in the dollar. Even though it does not appear likely in the near future, a collapse in the dollar would seriously deplete the value of international reserves and throw the world's finances into considerable disarray. Nor does the prospect of the multiple-reserve currency system which has gradually come into being since 1973 offer much comfort. Such a system requires much more stability in exchange rates than has been evident over the last decade.

The SDR was created, in a flash of enlightenment, in the dying days of the gold exchange system. Its mission was to rescue the world from the "barbarity of gold", whose supply for official reserves depended on the output of gold mines and competing uses by industry and consumers. Yet the system which emerged during the 1970s transferred the privileges of gold-mining nations to one country, perhaps along with two or three others, which happen to be the world's leading industrial powers and therefore issuers of "reserve currencies". By virtue of this privilege, these countries are less subject to the disciplines of fiscal and monetary policy than other countries (most developing countries).

Therefore it might make sense not to resurrect the "Link" proposal, but rather to try to reconstitute the SDR as a reserve asset of growing importance to the world's monetary system. New emissions of SDRs according to current rules would benefit developing countries, many of which are not "awash in liquidity". The world as a whole would also benefit as official reserves become less vulnerable to fiscal, monetary and balance of payments policies in the USA. Even though the latter would suffer a loss of "seigniorage" over the global economy as a result, American citizens would benefit as their own government becomes subject to the disciplines so often urged upon other nations.

In terms of our three selection criteria, new emissions of SDRs would not confer much in the way of resource additionality, since their use would incur interest-payment liabilities. However, they would bestow allocative flexibility on developing-country recipients, who could use them for general import purposes if necessary. Finally, there should be some ease of negotiation in agreeing new SDR allocations, since most developing countries have endorsed this position for some time. The difficulty can be anticipated on the developed-country side, particularly from the USA.

Recommendation. Canada should use the occasion of UNCED to help build a new consensus for the SDR, resulting in a resumption of emissions in the 1990s. Such a position should not be tied to the question of the "Link", but to issues of the stability of the world monetary system and global governance. This would require reversing Canada's opposition over the past seven years to new allocations.

THE UNITED NATIONS AND THE HUMAN ENVIRONMENT — SOME EXPERIENCES

Lars-Goran Engfeldt

Much has been said about the first United Nations Conference on the Human Environment, its preparations and results. If the author nevertheless adds to the wealth of material already available, it is because of a desire expressed by the editor of this journal for a non-technical summary of some experiences from the five years which have passed since the Swedish government took its initiative to place the problems of the human environment on the agenda of the United Nations for the first time.

WHAT WERE THE AIMS OF THE SWEDISH INITIATIVE?

Increasing signs all over the world of serious negative environmental side-effects of the rapid development of science and technology, particularly after the Second World War, provided the general background for the Swedish initiative. These problems transcended national boundaries and cut across traditional administrative borderlines, thus rapidly rendering obsolete existing national and international institutional mechanisms in the environmental field. The notion of a growing interdependence between the nations, which resulted from these developments, stimulated the emergence of a new concept in world politics—that of the oneness of our planet, the fragile spaceship earth, later symbolized by the motto for the Stockholm Conference, "Only One Earth." The stage was set for a new kind of international discussion, involving not only considerations of practical measures to deal with these new problems, but also a questioning of traditional values in today's world. Was not a broader concept of the development process called for, one

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which took into account more aspects of particular importance for the quality of the human existence?

Very little had been done in practical terms, however, to face the new situation. The dominant notion of national sovereignty still characterized international relationships more than ever and constituted an effective constraint to rapid international action. Differing views or lack of knowledge about the seriousness of the new problems were other impediments. The politicians largely ignored warnings from scientific circles that the threat to the environment caused by man's activities was of critical importance to mankind.

There was, in 1968, a lack of awareness among politicians and administrators about the global significance of these problems and their probable large future impact on international relations. The lack of awareness was particularly striking in developing countries. This general situation was reflected in the low priority accorded to the environmental question both nationally and internationally. Existing efforts were fragmented and were undertaken on a small scale. Duplication of work was apparent at the international level. It is worth noting that the United Nations took up the environment issues well before, and indeed contributed to the triggering of, the explosion of environmental consciousness in many parts of the world around 1970.

The basic aims of the Swedish initiative, which have now been largely fulfilled, can be described as follows:

1. to anchor the problems of the human environment in their totality on the agenda of the General Assembly, the highest political organ of the United Nations,
2. to dramatize the issue, which at that time had not yet received widespread public attention,
3. to bring about a long-delayed dialogue between government leaders and officials and the scientific community about the nature and significance of the environmental problems for society at large, hopefully resulting in better measures to deal with them,
4. to identify the environmental problems which could only, or best, be solved through international cooperation,
5. to demonstrate, in spite of widespread doubts, the ability of the United Nations system to respond effectively to challenging new problems of extraordinary importance, a consideration of particular significance for small or medium-sized countries with a strong national interest in maintaining a viable world organization.

IS THE UNITED NATIONS SYSTEM OBSOLETE?

One must bear in mind that the sectoral structure of the United Nations system, which was conceived in a very different international situation in the 1940s, constitutes a strong impediment to the effective

role of central leadership and coordination for the United Nations itself. The problem often rests with the individual governments, which frequently are unable to prevent their representatives in the legislative bodies of the specialized agencies from pursuing different policies in the various organs. The situation gets further complicated by the apparent desire of each secretariat to extend its relative influence within the system, in turn encouraging duplication of efforts.

The main inter-agency coordination body, the weak Administrative Committee on Co-ordination (ACC), has essentially served to reaffirm the prerogatives of the individual agencies. The position of the United Nations as *primus inter pares* has only seldom found practical expression. This situation could not have existed without the tacit concurrence of the most influential members of the United Nations, which at the intergovernmental level, have consistently refrained from using their main instrument for inter-agency coordination, ECOSOC, to any where near its important functional capacities as laid down in the United Nations Charter.

It is clear that any effort to make the United Nations respond adequately to the cross-sectoral problems posed by modern science and technology will encounter great difficulties as long as the member governments are not prepared to question seriously the relevance of the organizational structure of the United Nations system in the contemporary era. But the way in which the United Nations eventually responded to the environment initiative in 1968 gives rise to certain hope for the future.

EARLY EXPERIENCE 1968 - 1970

The achievements of the first two years of discussion in the United Nations were of vital importance for subsequent efforts which led up to the Conference in June 1972. During this period, the necessary political and conceptual basis was established, without which it would have been difficult to prepare and put forward the far-reaching action proposal which were later adopted by the Conference.

In the course of this period, *the General Assembly unanimously accepted the idea of the Conference and its basic aims, and laid down the structure of the preparations for it.* The political character of the Conference was underlined by its mandate to serve as a practical means to encourage, and provide guidelines for, action by governments and international organizations in the environmental field. Later discussions on the development-environment issue benefited both from the early recognition of the importance of giving increased attention to environment problems for sound economic and social development, and from the decision that one of the main aims of the Conference would be the prevention of such problems in developing countries.

Furthermore, the General Assembly entrusted the secretary-general of the United Nations with the overall responsibility for organizing and preparing the Conference. This responsibility was later delegated to the secretary-general of the Conference, Maurice F. Strong of Canada, and enabled him to pursue the preparations for the Conference in an effective way.

The Preparatory Committee of 27 governments was an *advisory* body only, which reduced the risk that preparations for the Conference would become stalled at an early stage because of differences between governments on substantive matters. And the unique role given to the secretary-general was essential for successful efforts to overcome such differences before the Conference took place. This overall mandate also enabled Maurice Strong and the Conference secretariat to play a leading role in the consultations with governments concerning the draft action proposals to be presented to the Conference, while at the same time retaining the ultimate responsibility for the content of these proposals.

Although these discussions in the United Nations started to gain attention at the national level in most developing countries only after 1970, the fact that these countries agreed to the initiation of the preparations for the Conference was important in itself. It should be mentioned that the widely discussed view advanced by George Kennan in the April 1970 issue of *Foreign Affairs*—that the United Nations was not the proper forum for dealing with environmental problems because these problems were mainly caused by ten of the world's most industrialized countries—did not greatly influence the United Nations discussions.

A general feature of the debates during this period was that few issues directly involving national interests of member states were at stake. The readiness of the most influential countries in the United Nations¹ to participate in a continuing consideration of these questions can be explained partly by this fact and partly by the confidence enjoyed by Sweden's permanent representative to the United Nations, Ambassador Sverker Astrom, who was the main spokesman for the environment cause.

The relatively positive attitude taken at an early stage by the

¹ The attitude of the United Kingdom and France was initially rather sceptical of the idea of a United Nations environment Conference. They favored a continuation of sectoral activities within the specialized agencies without costly manifestations at the central United Nations level actively involving the developing countries whose problems were not particularly acute, but which could be expected to use "the environmental bandwagon" as a vehicle for more financial assistance from the industrialized countries. This attitude was subsequently modified to a more positive approach.

Soviet Union deserves special mention. The Soviet delegation had already made it clear during the first discussion in the General Assembly in 1968 that environmental problems, although basically national in character, required international cooperation for their successful solution. The Soviet recognition that serious environmental problems accompany the development process in the socialist societies too was a prerequisite for the constructive (although low-key and basically non-committal) participation of the Soviet Union and other socialist countries in the preparations for the Conference. Their participation was an important factor in securing a firm place for the environmental problems on the United Nations agenda.

However, it became clear during this period that a real and lasting involvement by developing countries in the environment issue could not be expected unless proper contacts were made with them directly at the national level. It was apparent that several developing country delegations in New York did not communicate with their capitals, and that their representatives in the United Nations often did not take a deep interest in the subject. There were also a few cases of suspicion (Brazil, Ghana) against the underlying motives of the environment discussion. This situation was recognized early as a potentially serious problem.

One final word should also be said about the attitude of the representatives of the specialized agencies of the United Nations. Obviously, their interests were affected by the attempt to transform the United Nations into a policy center for further activities in the environmental field within the United Nations system. Of the many specialized agencies, it was mainly UNESCO, with its special responsibilities and ambitions in scientific matters as demonstrated by the Biosphere Conference in Paris in September 1968, which initially expressed fears that its own activities in this field could become preempted.

But it was repeatedly made clear in the resolutions of the General Assembly and ECOSOC that on-going and planned environmental activities in the United Nations system were to be encouraged. Further, a discussion on possible future institutional arrangements resulting from the Conference was consistently avoided at this early stage. Both these actions helped secure the cooperation of the agencies concerned. This cooperation proved, on the whole, to be successful during the further preparations of the Conference.

MAURICE STRONG'S CONFERENCE PROCESS

These early accomplishments gained their real significance as a result of the firm and dynamic leadership of Maurice Strong in the subsequent preparatory process. He was appointed secretary-general

of the Conference in September 1970, and took up his duties in November of the same year.

When Strong took command of the preparations in late 1970, he began an uphill battle which ended with remarkable success only 20 months later. He started his work in a critical situation. The political mandate to actively pursue the substantive preparations for the Conference had already been granted the United Nations secretariat in December 1969. Unfortunately, an adequate Conference secretariat was not established until after he had taken up his duties. Many months were lost thereby. Furthermore, several influential countries (e.g., the United States and Canada) seemed doubtful of the ability of the secretariat to handle the preparations for the Conference, and Strong was confronted with increasing problems concerning the participation of developing countries in the preparations. How did he approach his challenging task?

When Strong first appeared before the Preparatory Committee at an informal meeting in November 1970, he presented a few simple concepts which thenceforth guided the entire preparations for the Conference. Even then he inspired the confidence which was so essential for overcoming both the immediate problems and the inevitable differences in viewpoint on substantive questions between certain governments that would arise at a later stage. He envisaged

1. a preparatory process, which would satisfy the expressed desire of governments for comprehensiveness and for action,
2. the creation, within existing budgetary limits, of a small and efficient Conference secretariat, coupled with a drastic reduction in the documentation previously foreseen for the Conference,
3. special measures to stimulate the interest of developing countries in the Conference.

THE PREPARATORY PROCESS

The preparatory process designed by Strong was structured on three levels, the first being the *intellectual-conceptual* level. The efforts on this level were aimed at identifying major areas of intellectual consensus and providing a comprehensive review of the existing state of knowledge and opinion on the relationship between man and his environment. The major contribution in this respect was the unofficial "report on the state of the environment" which was prepared by Barbara Ward and René Dubos with the advice of a team of consultants from all over the world.

It was to the results of preparations on the second level that the Conference devoted most of its deliberations at Stockholm. This was the task of *preparing an action plan with a work program for the years ahead*. The plan would consist of those items on which a sufficient de-

gree of consensus could be reached to enable agreement at Stockholm on concrete recommendations for future action, and on institutional arrangements for taking those actions.

The third level consisted of *those few items on which action could hopefully be completed by the Conference*. The possibility of adopting a convention on ocean dumping was mentioned in this connection.

The basic approach of Maurice Strong was generally endorsed by the Preparatory Committee in February 1971. The Committee further agreed on a proposed agenda for the Conference which delineated the scope of the Conference and provided the general basis for the preparation of the draft action plan. Several projects for action at the third level were also initiated through the establishment by the Committee of intergovernmental groups on marine pollution, monitoring, soils, conservation, and for the drafting of a declaration on the human environment. The groups were given rather ambitious terms of reference. They provided excellent forums for intergovernmental consultation before the Conference by bringing together governmental experts and diplomats committed in advance, by the directives of the Preparatory Committee, to producing concrete results at the Conference, results which could be expected to be closely monitored by public opinion. The work of the intergovernmental groups considerably advanced the level of consensus in their respective fields.

The Preparatory Committee had two more meetings, in September 1971 and March 1972, during which the progress of the preparations was reviewed. At the meeting in September 1971, the first outline of the draft action plan was discussed, and at the last meeting in March 1972, particular attention was devoted to the institutional follow-up of the Conference.

THE CONFERENCE SECRETARIAT

Apart from the initiation of the preparatory process described in general terms above, the international organizational measures were also of the greatest importance for the later success of the Conference. According to an earlier approach, the main resources would have been devoted to the preparation of extensive documents prepared within the United Nations system, without sifting and horizontal coordination by the minimal Conference secretariat then foreseen. By transferring limited resources from the preparation of voluminous Conference documentation to the establishment of a high-grade Conference secretariat assisted by a number of consultants, several objectives were achieved.

First, it then became possible for the Conference secretariat to exercise the leadership role in the preparatory process envisaged by the General Assembly. Second, with the changed emphasis, the action-oriented character of the Conference was confirmed. The Conference

secretariat took on the task of preparing concrete action proposals, distilled from a mass of incoming background material (about 15,000 pages) which had been prepared by governments, organizations in the United Nations system, nongovernmental sources, etc., on request or at their own initiative. The national reports prepared by governments played an important role in this process, both by increasing the awareness within the government administrations of the nature and extent of the environmental problems within their countries and by providing the Conference secretariat with very useful material, which, in effect, constituted the first global survey of environmental problems ever undertaken.

The draft proposals were continuously refined by means of a process of close consultations with governments, making the Conference and its preparations into a model for successful multilateral cooperation. The technique of inviting key persons within the national administrations to informal rounds of discussion in their personal capacity was particularly successful. Through these consultations, and by avoiding scientific and technical discussion at the Conference itself, it was possible to present to the Conference a documentation of less than 900 pages, exclusively containing draft action proposals around which a considerable degree of consensus had been already achieved.

DEVELOPING COUNTRY PARTICIPATION

The special efforts designed to stimulate the interest of developing countries had to be given top priority in order to maintain the broad political base necessary for a successful Conference. Through personal visits to more than 90 developing countries in 1971, Maurice Strong managed to stimulate an active interest at their national levels in the preparations for the Conference. National reports were prepared in many developing countries. In some cases, their preparation was made possible by financial assistance from certain industrialized countries (Denmark, Japan, Netherlands, Sweden, and the International Development Research Centre of Canada). The measures to bring about an early and penetrating consideration of the development-environment issue, discussed in somewhat more detail below, were also of singular importance.

THE CONFERENCE

In spite of the massive agenda to be dealt with in only 10 working days, and several difficult issues which could not be solved during the pre-Conference consultations, the 113 countries represented at the Conference completed their task in a remarkable spirit of cooperation. The active and, on the whole, constructive involvement of nongovernmental groups, both in the Conference and in parallel activities outside

its framework, was also a positive experience and no doubt contributed to this positive result.

Judging by the standards of multilateral international political cooperation, the results of the Conference are impressive. A *Declaration of the United Nations Conference on the Human Environment* was adopted, constituting the first expression of a community of interests among nations in the field of environment regardless of politics, ideologies, or economic status. Perhaps the most important element of the Declaration is the principle of the responsibility of states referred to later.

The Conference further adopted an *Action Plan*, consisting of 109 recommendations for action at the international level. Taken together, a major part of the recommendations will constitute the foundation for an Earthwatch program of global assessment and monitoring, badly needed to guide decision makers in all countries. The recommendations to drastically curtail emission of chlorinated hydrocarbons and heavy metals into the atmosphere, to establish an International Referral Service to exchange environmental information and knowledge between nations, to incorporate environmental considerations into the review of the development strategies embodied in the Second Development Decade, to initiate a global program to ensure genetic resources for future generations, all are indicative of the emergence of a political will to take action transcending traditional political and ideological boundaries. The recommendations on *the future organization of the environmental activities of the United Nations* provided a solid base for implementing the results of the Conference and giving the United Nations itself its desirable central role in the environmental field within the system.

If these results give rise to satisfaction, it should be noted that Maurice Strong correctly pointed out at the closing of the Conference that there were no reasons for overconfidence. The Conference had only taken "the first steps on a new journey of hope for the future of mankind."

Below, some questions are discussed which attracted special interest during the Conference and its preparations.

FOUR IMPORTANT ISSUES

1. Development and Environment

Indifferent to the Conference in most cases, some influential developing countries, particularly Brazil, gave increasing indications from early 1970 of an actively sceptical attitude. In various statements in United Nations forums, Brazil charged that the Conference was a rich man's show to divert attention from the real needs of developing coun-

tries. The industrialized countries also were said to be attempting, through the preparations for the Conference, to place a ceiling on economic growth in developing countries, thereby further securing their own dominant role. Furthermore, any infringement on the national sovereignty of developing countries, particularly their right to an unlimited exploitation of their natural resources, was unacceptable. Finally, international resources made available for environmental programs must be *additional* to those earmarked for development assistance within the target proclaimed in the strategy of the United Nations Second Development Decade of 1 percent of GNP.

These strong views were contradicted by protagonists for the environment cause, mainly Western industrialized countries (notably Canada, Netherlands, Sweden, and the United States). They argued that the origins of environmental problems are fundamentally the same in all countries and in every economic system. It is the poor who stand most to gain from an enhancement of their environment. It is essential that the developing countries use their right to participate in the formulation of international action programs in the environmental field to ensure that their specific interests are taken into account. For, the argument continued, the poor have everything to gain from an active United Nations involvement in this field: Not only do the developing countries have serious existing environmental problems (soil deterioration, water pollution, urbanization, negative effects of dam construction, loss of wildlife, etc.), but they have the possibility of avoiding many costly mistakes made earlier by the industrialized countries when planning for their own economic development. Also, the global implications of the environment issue, dramatically illustrated by the only-one-earth concept, made it impossible to deal with effectively without the participation of all countries.

Maurice Strong actively sought to reconcile these views. He ensured, at an early stage of his work, that the development-environment issue received a prominent place on the agenda of the Conference, and set in motion a series of discussions starting with the well-known experts meeting in Founex, Switzerland, in June 1971. He stated before the Preparatory Committee that the primitive level of the present comprehension of the complex relationship between man and his environment was best illustrated by the alleged conflict between environmental concerns and developmental concerns. He further emphasized that the perception of these issues was distorted by the labels "development" and "environment," which had obscured the essential common nature of the ultimate goals of both, i.e., the well-being of man. Environmental concerns must be an integral part of the development process, he went on, and should lend support to that process by bringing new insights to it.

The Founex report, which was endorsed by subsequent regional seminars in Bangkok, Addis Ababa, Mexico City, and Beirut bringing together scientists and administrators with responsibilities in the environmental field, made an important contribution to raising the level of discussion and paving the way for a generally accepted, broader concept of development. It represented, in effect, a breakthrough in the preparations for the Stockholm Conference. The report underlined, *inter alia*, the importance of increased technical and financial assistance to developing countries in securing their continuing rapid development, taking environmental considerations into account in the planning for such development.

At the Conference itself, the positive result of these meetings was widely acclaimed. Although one could not expect a convergence of political views between, say, Algeria and the United States, whose statements differed substantially in the perception of the nature of the development-environment relationship, inflammatory rhetoric, which could have seriously impaired the outcome of the Conference, was avoided. An interesting development already observed during the preparatory process was the increasing influence of developing country scientists on the political position of their governments in a more moderate direction, which undoubtedly contributed to this result.

An important test for the newly established Environment secretariat will be to maintain the momentum achieved in this area. The decision to locate the secretariat in Nairobi should facilitate this task.

2. Marine Pollution

From national reports, it was soon learned that governments all over the world regard the problem of maintaining the quality and adequate supply of one of our most precious resources, water, as a crucial factor in the struggle for a better environment. The problems of marine pollution, which cover one important aspect of this general problem, were particularly appropriate for consideration at the Conference for several reasons.

First, the global nature and the increasing graveness of these problems, which affect areas outside the national jurisdiction of states, required that they be brought in their entirety before a political forum with as universal a composition as possible. Second, the absence of effective coordinating mechanisms, at both the national and international levels, to deal with these serious problems made it the more urgent for a Conference with the basic aims described above to give priority attention to this area.

The interest of the international community in finding solutions to the complex problems of the control and management of the oceans and their resources had begun to find concrete expressions in the United

Nations towards the end of the 1960s and the beginning of this decade. This interest was channeled into activities of various United Nations bodies which often did not coordinate with each other in any real sense.

The General Assembly began the process of laying the legal foundations for some future formal recognition by the international community of the concept of the "common heritage of mankind." These efforts, which included considerations of marine pollution problems, were intended to culminate in the Law of the Sea Conference which will take place in 1974. In the Second Committee of the General Assembly, a request to the secretary-general was initiated asking, for the first time, for the preparation of a comprehensive report on the problems of marine pollution, including a list of harmful chemical substances, with indications of priorities for action. IMCO launched preparations for a conference in 1973 with the aim of regulating pollution from ships. How did the Conference on the Human Environment fit into these and the many other international efforts in this area?

A general comment is that the preparations for the Conference were the first attempt to establish the foundations of a policy-oriented, coordinated approach to marine pollution activities within the United Nations. This had been lacking so far. It was also clear that significant aspects of the problem, such as pollutants reaching the sea directly from the land or indirectly through the atmosphere, had not yet received adequate attention. The Stockholm Conference thus identified those aspects of marine pollution resulting from activities at or under the sea, and, in addition, indicated a possible approach for bringing marine pollution from other sources under control. Of these, the landbased sources are the most serious, and potentially the most difficult to deal with in an international context, in view of their origin within the territorial borders of states.

More specifically, the Conference took the first steps towards the establishment of a globally coordinated multidisciplinary marine pollution assessment program. Such a program will enable governments to identify significant sources, pathways, and effects of pollutants harmful to human health or living resources. Within the foreseeable future, through increasingly sophisticated research and monitoring activities on a global scale, the General Assembly will hopefully be able to point to specific sources of marine pollution (landbased and others) and generate a political atmosphere which could influence the governments concerned to take necessary preventive and corrective measures. The political basis for this work is provided by Article 21 of the Declaration adopted at Stockholm, which recognizes the responsibility of states to ensure that activities within their national jurisdiction or control do not cause damage to the environment of other states or to areas beyond the limits of national jurisdiction. This clause could have far-reaching importance

for the United Nations, indicating that, in certain cases, states are prepared to voluntarily limit their national sovereignty.

The Conference also was instrumental in advancing multilateral agreement in the field of ocean dumping. The text of a draft convention, which had been prepared by the Intergovernmental Working Group on Marine Pollution, was finalized, on the recommendation of the Conference, at a meeting between governments in London last autumn. The convention forbids the dumping of certain materials and substances in the ocean, and introduces some degree of governmental control of other kinds of dumping.

None of these efforts was without problems. Several Latin American states, for which significant national interests are at stake at the forthcoming Law of the Sea Conference, tried to prohibit the Human Environment Conference from dealing with marine pollution problems in a way which, in their opinion, could prejudice the outcome of the Law of the Sea Conference. The underlying motive might have been that agreements in the field of marine pollution, actively sought by several industrial countries, should be made in the larger context of the Law of the Sea Conference where this interest could be used as a leverage by Latin American countries in facilitating international recognition of their unilaterally proclaimed territorial sea borders of, in some cases, 200 miles.

Canada had wished that the preparations had gone farther in laying the basis for internationally agreed principles of behavior in relation to marine pollution problems, an aim which many other countries felt to be too ambitious at this time. It thus expressed reservations against what it considered to be a "piecemeal approach" of the Conference and its preparations.

3. The German Question

The fundamental stumbling block represented by the German question for many initiatives in the United Nations over the years is well-known. The preparations for the Conference were, not surprisingly, affected by the persistent efforts of the Soviet Union, as part of its general policy in the United Nations, to press for equal participation in the Conference and its preparations by the German Democratic Republic, and by the determined opposition to this demand from the United States, Great Britain, and France, acting in close consultation with the Federal Republic of Germany. Although there were, at times, signs of a softer attitude on both sides, the end result was that several socialist countries, including the Soviet Union, did not participate in the Conference, in spite of their valuable contributions to preparation and declared interest in environmental problems. On the other hand, countries like China, Rumania, and Yugoslavia did participate. The

rapid progress in the relations between the two German states since then will, in all likelihood, pave the way for their membership in the United Nations later this year. It is ironic that the Conference on the Human Environment, with truly universal subject matter on its agenda, thus became one of the last victims of the cold war.

In spite of this regrettable fact, it is now clear that the foundation laid by the Conference for future international cooperation in the environmental field was not seriously affected by the absence of the above-mentioned countries. The immediate impact on the Conference of their absence was further reduced by the attention given to Chinese participation.

As a promising compensation for the problems connected with the participation in the Stockholm Conference, the newly established Governing Council for the United Nations Environment Program (UNEP) became the first General Assembly body where the two German states will be represented.

4. The Future Organization of the Environmental Activities of the United Nations

The entire preparatory process would certainly not have yielded lasting results had it not provided for thorough intergovernmental consideration of the appropriate organizational follow-up of the Conference. The establishment of a permanent institutional framework to provide leadership and coordination within the United Nations system was indeed one of the primary aims of the Conference.

An important consideration of the Conference secretariat was that "form should follow function," which implied that the discussions on institutions should commence only when there was a fair degree of consensus about the functions these institutions would be asked to perform. This approach minimized the risk of an early concentration on the potentially controversial institutional issue, which could have resulted in both less effective institutions and reduced possibilities for dealing successfully with the substantive matters on the Conference agenda.

When the informal consultations started in the spring of 1972, a general feeling was already evident that the establishment within the United Nations itself of a new intergovernmental body, a secretariat unit, and a fund would be desirable. There was also early agreement that no new special agency should be contemplated, given the interdisciplinary nature of the environment issue, and that the new machinery would rely on existing organizations in the United Nations system for the execution of projects under its overall guidance. Its role would thus be essentially coordinating and nonoperational.

The United States took the lead in presenting to the Preparatory Committee, in March 1972, its detailed proposals, which were centered around the proposed establishment of a fund based on voluntary contributions. The resources of the fund would be administered by a top-level executive ("administrator") entrusted with wide discretionary powers by the new intergovernmental body. The administrator and his small staff would be financed out of the fund. He would ensure an effective coordination of the activities of the specialized agencies through a special coordinating board which he would chair. The agencies would have to look to the fund for the financing of all new projects in the environment field. At about the same time, the United States also announced its readiness to contribute 40 percent on a matching basis to a fund of a projected size of \$100 million in five years. The American approach, if implemented, probably would have secured an overwhelming influence in the future work for the United States as the largest potential contributor to the fund.

Other delegations, particularly Brazil, Canada, and Sweden, soon informally put forward other views. The basic thrust of the Brazilian argument was that (1) the new intergovernmental body, whose majority would be made up of developing countries, should have the real control, (2) the secretariat unit should be mainly financed out of the regular budget of the United Nations in order not to make it dependent on voluntary contributions, and (3) the vital interest of the developing countries for continuous economic growth should not be jeopardized by the establishment of new permanent United Nations machinery in the field of environment.

Canada emphasized that the fund should be used primarily to initiate and stimulate projects and not to finance all new environmental activities within the United Nations system. According to this view, the adoption of the American approach would have rapidly depleted the limited resources foreseen for the fund.

Sweden shared the American concern for effective leadership within the United Nations system, but it felt that the new governing body, where the smaller countries would have an influence, should be responsible for issuing the necessary directives to this end. The head of the secretariat unit should have sufficient authority to carry out the instructions of the governing body in an effective way. The unit should preferably be financed out of the regular budget in order to secure continuing United Nations concern for the environment. Sweden, as host country, took an active role in reconciling the many different views between the governments most interested.

Space does not permit an account of the many other questions which also were the object of long and arduous consultations lasting up to the last days of the Conference. Suffice it to say that a delicately

balanced document finally was unanimously adopted by the Conference and later approved by the General Assembly as Resolution 2997 (XXVII). The final decisions will mean that the center of influence will be in the new 58-member Governing Council, which has been given a strong mandate to provide policy guidance for the direction and coordination of environmental programs within the United Nations system. It will also keep the world environmental situation under constant review in order to ensure that important emerging environmental problems receive rapid consideration by governments. At the same time, the executive director of the Environment secretariat, who will be responsible for implementing the decisions of the Council, was given considerable freedom of action, including the right to bring before the Council any matter he deems fit and to advise, under the guidance of the Council, intergovernmental bodies within the system on the formulation and implementation of environmental programs. This provision will give him direct access to the legislative bodies of the specialized agencies. On the secretariat level, he was further given the far-reaching responsibility for coordinating environmental programs within the United Nations system under the guidance of the Council, and keeping their implementation under review and assessing their effectiveness. He was also given the special status of a high-level official *elected* by the General Assembly and not, as is customary, appointed by the secretary-general and confirmed by the General Assembly. This was intended to strengthen further the authority of the executive director, both within the United Nations secretariat and the entire system, where the director-generals of the agencies are also elected by their legislative bodies. To facilitate his coordinating role, an Environment Co-ordination Board, of which he is the chairman, was established under the auspices of the ACC. The executive director will also administer the Environment fund under the authority and guidance of the Governing Council.

It is encouraging that the terms of reference of the new institutional machinery have the scope and strength originally hoped for by the Conference planners.

SOME PROSPECTS FOR THE POST-CONFERENCE ERA

The task in the years ahead will be difficult. There will be no easy road to success. The institutional, political, financial and other constraints are such that an extraordinary combination of skills, will power, and patience will be required. When assessing the prospects for the future, many factors must be taken into account. The comments below aim primarily at demonstrating the complex and challenging nature of the undertaking.

The Environment Secretariat

The unique responsibility of the secretary-general of the Stockholm Conference will be transferred to the executive director of the Environment secretariat with regard to both the overall terms of reference and the element of continuity provided by Maurice Strong's unanimous election by the General Assembly to this post. It is to be hoped that he is able to bring together a first-class staff with the limited resources available to him. In exercising the wide coordinating responsibilities entrusted to the Environment secretariat, it is vital that its staff have considerable managerial and substantive competence. The performance of the secretariat will be constantly under scrutiny, and the judgments passed on it will influence the attitude of governments, agencies, and public opinion concerning the ability of the United Nations to deal effectively with the environment issue.

An important initial function of the secretariat will be to prepare proposals for the future work program to the Governing Council. In drawing up these proposals, it is very important that the temptation to cover too wide an area with limited resources be resisted. There were special reasons for the broad agenda of the Stockholm Conference, the first of its kind. Now, in the implementation stage, success may hinge upon the execution of a few important projects. Carefully selected priority areas for particular treatment and attention by the Environment secretariat should be established within the action plan. Within such areas, the Environment secretariat should take as active a role as its resources permit. The secretariat, by such a course of action, will increase its chances of becoming a real center of influence. By spreading available resources thinly over a wide spectrum of activities, the small secretariat, which will have to rely on other organizations for the execution of projects, could be reduced to a mere clearing-house through which progress reports would be fed to the Governing Council. The importance for the environment cause of securing a conceptual and substantive leadership role for the Environment secretariat within the United Nations system cannot be overstressed.

The decision to locate the secretariat in Nairobi was taken in response to strong urging by developing countries, particularly those in Africa, that it was high time for the United Nations to establish an important body outside North America and Western Europe. The Nairobi location should give the secretariat special opportunities to maintain the active participation of developing countries in the operation ahead. Hopefully, the administrative difficulties connected with its establishment there will be quickly overcome and ways will be found of reducing the disadvantages of the distance between Nairobi and the agencies in the United Nations system with which day-to-day contacts must be kept. An important point in the latter connection is that

the planned establishment of liaison offices in Geneva and New York should not be allowed to detract from the fundamental fact that the headquarters of the organization will be located in Nairobi, and that that is where the decisions will be made. As a complement to the secretariat in Nairobi, scientific institutions and other nongovernmental organizations should be encouraged to establish offices there too. This would add much to the intellectual vitality of the organization.

The Governing Council

It goes without saying that governments will have to play the decisive role in the coming undertaking, but it remains to be seen how the Governing Council will exercise its wide responsibilities. Its theoretical power to direct and control environmental activities within the United Nations system is such that a centrally coordinated effort could soon become a reality. To achieve this aim, it will be necessary for governments to organize themselves better internally, so that their decisions in the Governing Council will, in fact, be reflected in their actions in the legislative organs of the specialized agencies as well. The Governing Council must further delegate sufficient authority to the Environment secretariat, which will be its instrument for day-to-day operations.

Of primary importance will be whether the Governing Council succeeds in dealing with the substantive issues on its agenda. Its composition gives the developing countries a two-thirds majority. Hopefully, the same spirit of compromise which characterized the proceedings of the Preparatory Committee for the Conference will prevail here also. Several difficult questions will be coming up, including the distribution of the limited resources of the Environment Program to projects of differing concern to the industrialized and industrializing countries. In the efforts to establish a worldwide monitoring network, the attitude of the socialist countries towards international exchanges of data will be crucial. In the field of marine pollution, it remains to be seen whether, in light of the forthcoming Law of the Sea Conference, the Governing Council can and will utilize its mandate from the Conference to take overall responsibility in the United Nations system.

Other difficult problems may arise when the clause in the Declaration of the responsibility of states is put to a real test. The compromise in last year's General Assembly session in the dispute between Brazil and Argentina,² which basically satisfied the restrictive Brazilian interpretation of this clause, will presumably not prevent similar cases being brought before the Council.

²The dispute originated from Argentina's concern about possible environmental disturbances on its territory caused by certain Brazilian river projects.

The actions of the Big Powers, either on their own or influenced by others, will indicate the chances of lasting success of the undertaking. These countries generally give low priority to United Nations affairs, but at the same time they have, in varying degrees, shown an interest in the environmental efforts of the organization. It will be interesting to see which tendency prevails.

The role of China deserves a particular word. China has taken a positive attitude towards the involvement of the United Nations in the struggle for a better environment, as it demonstrated at the Stockholm Conference. This has been in line with the current outward-looking phase in Chinese foreign policy. China's activities in the United Nations during its first year of membership have generally been cautious in areas where its primary political interests have not been involved. By the time it feels more experienced in the United Nations, one cannot exclude the possibility that China will take a tougher line in many matters. The long negotiations at Stockholm on the content of the Declaration (particularly the clause recommending the elimination of weapons of mass destruction) which, at one point, threatened the Conference with failure, were largely initiated by the Chinese delegation. One cannot take it for granted that China will always take the same conciliatory attitude in the future as it finally took at the Conference.

Financial Resources

The relatively modest size foreseen for the Environment fund suggests that funds should be used for seed money only, or else some of the far-reaching recommendations in the action plan (e.g., in the costly field of monitoring) will not have a chance of being implemented. It is to be expected that major elements of the projects approved by the Governing Council will be financed out of specialized agency and national budgets.

Hopefully, the donor countries will assist in keeping the momentum of the environment effort by starting to make their contributions to the fund as early as possible. Another point to note is that the executive director should be given a high degree of flexibility in utilizing the resources of the fund (naturally under the guidance and the spirit of the directives of the Governing Council) to be able to put each dollar to maximum use. As long as he has the confidence of the Council, his daily operation should not be complicated by financial rules requiring constant clearance by the United Nations headquarters in New York. His special status as an official elected by the General Assembly suggests that he should be given as much independence from the headquarters bureaucracy as possible.

Regionalism

The need for a global approach to the consideration of environmental problems was an important motivating force behind the Swedish initiative in 1968. The institutional arrangements now established by the General Assembly are themselves a recognition by the United Nations of this strong conviction. It is important that the Governing Council always keep this in mind, although regional solutions obviously should be aimed for in many cases.

No Stagnation

A final question to be asked is whether UNEP, which has been given a gigantic task with only small resources at its disposal, will be characterized by the same spirit of cooperation, fresh approaches, and vitality which was so remarkable during the preparations for the Stockholm Conference. There are examples of other international organizations with important functions which have been criticized for loss of momentum, growing bureaucratic inertia, and an increasing polarization of views between governments with a resulting deadlock in central questions.

The case for a joint international effort to deal effectively with the threat to the environment is compelling. Hopefully, governments will live up to the responsibility assumed by their adoption of the many action-oriented declarations at the Stockholm Conference. The dynamism and energy of Maurice Strong, who now has a solid foundation to commence his work, is a reassuring asset in the struggle ahead.

Postwar

Pre-Print

**THE ROLE OF THE SECRETARIAT
IN MULTILATERAL NEGOTIATION:**

**THE CASE OF MAURICE STRONG AND THE
1972 U.N CONFERENCE ON THE HUMAN ENVIRONMENT**

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**Prepared for the Case Study Series of the
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THE ROLE OF THE SECRETARIAT IN MULTILATERAL NEGOTIATION:

THE CASE OF MAURICE STRONG AND THE 1972 U.N CONFERENCE ON THE HUMAN ENVIRONMENT

Background

Sir Peter Scott, the eminent British environmentalist, naturalist, and painter, said back in 1972, "it is my firm conviction that the United Nations Conference on the Human Environment held in Stockholm in June of 1972 was the most important conference ever held."¹ This may not in fact be accurate, but it is perfectly clear at least in the eyes of some that the Conference marked a watershed in international relations. In less than two weeks 113 nations united and agreed upon an extensive Declaration outlining 26 basic environmental Principles and an Action Plan complete with 109 recommendations and 5 resolutions. The preparations leading up to the Stockholm Conference and the actual conference itself effectively legitimized environmental policy as a universal concern among nations. In so doing, it created a place for environmental issues on many national agendas where previously they had been unrecognized. In addition, the universal enthusiasm generated by the Stockholm preparations encouraged related intergovernmental discussions on specific issues of environmental concern: individual discussions directed at the curtailing of ocean dumping, global monitoring, and the killing of endangered species took place in tandem with the Stockholm Conference preparations. The occurrence of the Conference in June of 1972 acted as an effective deadline moving intergovernmental agencies to action before that time.

Looking back at the earlier years of the twentieth century, even starting as early as President Theodore Roosevelt, one finds great concern particularly in England and the United States for the conservation of migratory wildlife and the natural beauty that nature provided. It was during the early parts of this century

¹Sir Peter Scott, Forward to Peter Stone, *Did We Save the Earth at Stockholm*, (London: Earth Island Limited).

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that our national parks were created, and other measures were taken to really enhance the quality of the environment.

It was not until after World War II, however, that pollution, particularly of the oceans, became a matter of international concern. 1954 saw the passage of the first international treaty dealing exclusively with pollution, the International Convention for the Prevention of Pollution of the Sea by Oil. The first meeting on the Law of the Sea took place in Geneva in 1958, and marked the beginning of an organized concern for maintaining the ecological integrity of the oceans. One of the four conventions adopted at Geneva, the Convention on the High Seas, calls for the prevention of ocean pollution caused by the discharge of oil from ships and pipelines and by the dumping of radioactive wastes and other harmful agents. As exemplified by the Law of the Sea, treaties with environmental provisions existed before Stockholm. However, the Stockholm Conference was called "...to provide a framework for comprehensive consideration within the United Nations for the problems of the human environment..."² Such an all encompassing environmental mission had not yet been attempted on an international scale. People had begun to realize that certain problems of the environment could only be dealt with on a global basis. Its preparations required that each country reach a level of environmental self-awareness by researching and reporting on its own ecological well being. Through this self-inspection a national expertise emerged that simply had not existed before. This knowledge provided a foundation for the acknowledgement by states of their environmental responsibilities at the regional and global level.

Two events of particular importance occurred in the 1960s that sparked the industrialized world's awareness of the need for environmental concern. First, in the early sixties, Rachel Carlson's "Silent Spring" brought to light the devastating impact of DDT on bird populations, and the deleterious effect of industrial chemicals on the natural resources of the earth. The American public was shocked. Not long thereafter in 1967, an oil tanker called the *Torrey Canyon* spilled most of its cargo in the English Channel, destroying hundreds of sea birds and fouling that country's sea coast. The impact of this accident on people's awareness of pollution was significant, both on the European continent and in the United States. Out of this increased public awareness came an onslaught of legislation in the industrialized countries in the late 1960s designed to protect the environment. The United States, concerned with deteriorating air and water quality, enacted the Clean Air Act of 1963, the Water Quality Act of 1965, and the Environmental Policy Act of 1969. The latter statute authorized

²U.N. Resolution 1346 (XLV), July 30, 1968.

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the establishment of the Environmental Protection Agency and the Council on Environmental Quality, and mandated the use of the "environmental impact statement" for all federal activities that might affect the environment. In 1967, Japan adopted its Environmental Protection Act; Sweden established its own protection board in 1967, and in 1970 the United Kingdom became the first country to elevate its environmental agency to a cabinet level ministry.

It was at this time that the industrialized countries identified the need for multilateral action. Sweden, which had seen the necessity and benefit of multilateral coordination in its efforts to improve the water quality of the Baltic Sea, called for a United Nations environmental conference at an ECOSOC meeting on July 30, 1968, to encourage "intensified action at national and international level, to limit, and where possible, eliminate the impairment of the human environment."³ The proposal for such a conference was approved by the General Assembly in 1969, to take place in 1972. Sweden volunteered to host it in Stockholm. Soon after the Conference approval, the General Assembly selected a 27- country "preparatory committee" (Prep Com) and the Swiss biologist, Jean Moussard, was appointed the Director of Studies responsible for the Conference proceedings. Moussard would later be replaced by Maurice Strong. The Preparatory Committee had four official sessions, the first being in New York in March of 1970, where the committee selected topics for the Conference, defined the program content and established recommendations for action. It also considered the organization structure of the Conference, reviewed the documentation required, and cooperated in the creation of the initial draft of the Stockholm Declaration. At its second session, the Committee prepared a provision agenda for the Conference, discussed the possible form and content of a Declaration on the Human Environment and recommended the establishment of an inter- governmental working group on the Declaration. Everyone agreed that an environmental declaration was very important, and almost everyone had ideas as to what it should say. In fact, it was only at the end of the conference that they finally agreed what the text would look like. As is reported in Chapter 6 of the *Basic Report of the United Nations Conference on the Human Environment*, "[The Preparatory Committee] also carried out a preliminary examination of the question of marine pollution, monitoring or surveillance, pollutant relief limit, conservation, soils, training, information exchange and gene pools, and recommended the establishment of an international working group to deal respectively with marine pollution, monitoring, conservation and soils. It considered further the organization and structure of the Conference."

³ibid.

The Third and Fourth Session of the PrepCom continued to refine the substantive work of the Conference and continued to move on a very controversial document, the Declaration. The Fourth Session, in March 1972, concerned itself primarily with the organizational implications of the various recommendations for action and, of necessity, the financial implications of the various proposals. As one would expect, most of the negotiations that took place during the preparations of the Stockholm Conference occurred at the PrepComs. Unfortunately, little information exists on the progress of each meeting, so little attention can be dedicated to that critical stage of the negotiation process in this paper.

The negotiations that led to the success of the United Nations Conference on the Human Environment provide an excellent opportunity to analyze the bargaining techniques of Maurice Strong, the skilled Secretary General responsible in large part for the Conference's success. Preparations for the eventual eleven day long Conference took three years. It is in this time period that most of the negotiations and decisions for action took place. Though one or two issues challenged the success of the negotiation in its final stage - at the Conference itself - Strong and his staff effectively orchestrated preparations throughout the process to ensure that potential problems were identified early on and dealt with directly before they could mushroom into insurmountable conflicts. The most significant hurdle Strong overcame was the lack of interest developing countries showed for participating in the negotiations; this was in their view a "pollution" conference and thus of little concern. Strong and his staff, nonetheless, were largely responsible for illuminating the mutual benefits to be had in international cooperation and dealing with environmental problems that one way or another touched every nation.

A second internal hurdle was the attitude of the Specialized Agencies and the other members of the so-called UN family. All during the preparations there developed great concern among the agencies that what was being brewed at Stockholm represented a real threat to their future independence. Various agencies within the United Nations structure had their own vision as to who had jurisdiction over specific areas of environmental concern, whether the oceans, human settlements, forests and soils, air and water pollution or whatever. According to Hans Landsberg, who was on Strong's staff during the conference and did a paper entitled "Reflections on the Stockholm Conference", the turbulent waters were calmed on the very last day by a declaration that Maurice Strong made from the podium of the Plenary Session to the effect that the ultimate authority for programs was with each of the Specialized Agencies. Again, according to Landsberg, this statement was a response to widespread fears voiced only in the corridors and to the staff that Strong was in effect usurping

the traditional role of the Specialized Agencies. What Strong did was essentially to coopt the Specialized Agencies and to adroitly avoid possible turf battles.

The analysis will begin with Sweden's 1968 proposal that the U.N. sponsor an international environmental conference. Emphasis will be given on the role Strong played after his official appointment as Secretary General in January 1971, effectively replacing Jean Moussard. While the accomplishments of Stockholm had to be formally approved by the General Assembly in the Fall of 1972, and the United Nations Environmental Program (UNEP) had to be authorized, this study will conclude with the successful close of the Conference in June of 1972. In addition, a short summary by Ambassador John McDonald (a State Department delegate to the Conference) on the General Assembly negotiations to determine the location of the UNEP's headquarters is included at the end of this study.

Issue/Regime Change

To thoroughly appreciate the ramifications of the successful outcome of the Stockholm Conference on the Human Environment, one must realize that prior to the 1960s the byproducts of the industrial revolution had not yet made themselves generally evident. Prior to this time, international agreements dealing with the natural environment, concerned transboundary questions, such as the protection of endangered migratory birds or the cleanliness of transboundary rivers. There existed no systematic method of addressing a wide range of environmental issues in the same multilateral forum. For example, the 1958 Constitution of the High Seas dealt *inter alia* specifically with water pollution. In contrast, the primary purpose of the Stockholm Conference on the Human Environment was to construct a foundation on which a regime might be built to safeguard the quality of all aspects of the global environment, including the human.

In the late 1960s, as the prevalence of air and water pollution grew to a point where in some regions the earth's capacity to absorb a variety of pollutants was endangered, pollution emerged as a growing anxiety of the industrialized countries. These same countries determined that a need existed for international cooperation to limit world-wide toxic emissions.

It should be reiterated that at the time the concern for the "environment" rested largely with the developed world. Pollution was visible, and people were becoming seriously concerned about its impact on health, amenities, and other factors relevant to the quality of human life. Even though there were obvious environmental problems in the developing countries, pollution problems were not nearly as evident, nor were they as much a matter of concern in the

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developing world as they were in the developed world. In fact, many in the developing world openly welcomed the negative side-effects of industrialization. As one ambassador stated in the preliminary debate, "However much General Motors was a polluter, his country would still like to have it as a source of jobs and vehicles."⁴ Multilateral negotiation on environmental problems was not necessarily at the top of everyone's agenda. In fact, key LDC representatives predicted that the new-found, one-sided concern for the environment, and the proposals put forth by intellectual leaders of the developed world calling for global environmental management by the industrialized countries, would necessarily interfere with the progress being made in the developing countries to increase their standard of living. This belief was fueled by the growing popularity of the "quality of life" and "limits to growth" arguments. Simply put, their advocates condemned society's obsession with materialism and called for improving the "quality" of life. Some went so far as to call for the complete cessation of economic growth. As one might expect, supporters of these movements came from those countries that had already developed. Leaders from the poorer countries criticized the notion that limiting growth would improve the quality of life for their citizens.

Also, ironically, in many parts of the developed world the concept of protecting the environment and exposing its degradation — the Environmental Movement — was considered a bourgeois affair of little staying power, and therefore not a great concern of the public generally.

As has been pointed out by Peter Stone:

"Many governments began their participation in Stockholm with considerable reluctance founded on the suspicion that it was all a nine days wonder or a transient concern of the rich. Many bureaucracies whose main help was to avoid too much disturbance certainly attached a lot of weight to critics of the environmental movement, but in the end even the most reluctant took the conference, that is the Stockholm Conference, seriously."⁵

Real awareness of the environment was just beginning. The Stockholm Declaration eloquently articulates this growing concern.

⁴Peter Stone, *Did We Save the Earth at Stockholm?*, (London: Earth Island Limited, 1973) p. 14.

⁵*ibid.*, p. 16.

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Participants, Their Power, and Their Interests

The fact that the Conference on the Human Environment was conducted by the United Nations specifically limited the official negotiations to members of the United Nations or one of its specialized agencies.

By the time Maurice Strong had come on board the Stockholm environmental debate showed signs of becoming a spirited confrontation pitting the "North" against its neighbors to the "South." The terms North and South are used in this study to embrace developed and less developed countries, respectively; they are by no means geographically exact. The industrialized nations to the North saw the primary concern of the environment to be one of pollution control. The South, made up of the more numerous less-developed countries, did not initially see a problem with the environment *per se*. Instead the developing world looked toward a new international economic order that would promote its own economic development. One might say that its concern with the environment was quite secondary to its concern with development. Attempts on the part of the North to preserve the environment were not going to infringe on poorer countries' rights to economic prosperity.

This division is particularly useful in describing the pre-negotiation process, when countries had not yet made the bona fide decision to seriously discuss the possibility of an environmental agreement. When specific recommendations were debated, countries took positions consistent with their national interest. This is not to imply that all controversies created divisions of rich states against poor. For example, the Netherlands and Japan disagreed on an international whaling moratorium, Sweden and China spoke out against the United States' war effort in Vietnam, and New Zealand and Peru united to side against China and France's nuclear testing policy.

Lastly, as has been mentioned, though Strong was a non-voting member of the U.N. secretariat, he played a critical role in determining the direction the negotiations. For this reason he will be considered an active participant, directly effecting the outcome of the negotiations.

Developed Nations

The United States, many of the countries of northern Europe, and Japan were the primary players in the developed world. They had experienced first-hand the effects of pollution caused by their own industrialization. Certainly they wished to implement policies to diminish pollution in their own countries. Of equal importance, they were concerned that if the third world countries were to

develop in the same fashion that they had, the impact on their own environment, as well as that on the world generally, would be severe.

The economic power possessed by the industrialized countries provided them both a position of strength and weakness; strength because they were in a better position to support the implementation of potentially costly policies. Moreover, their early economic advancement and technological capabilities provided "in-house" expertise on environmental issues. These environmental experts were in a superior position to first diagnose the extent of ecological problems and then offer solutions to avoid the detrimental long term consequences of not altering policies.

The developed countries' economic power also worked against them. It was widely felt in the developing world that the already industrialized nations had in large part exploited the resources of the South to fuel their economic growth and prosperity. This belief left the developing world skeptical of the motives behind the North's calls for international cooperation in the form of the Stockholm Conference.

Developing Nations

For the major part of the negotiations the primary players in the developing world were Brazil and India. By the time of the Conference, the People's Republic of China would be given the opportunity to become a key player. Representatives from these countries had been spokesmen for the third world in international fora and were determined to speak out for the rights of the developing world at this forum also. These nations would in no way support the call to protect the environment at the cost of slowing down the pace of their own progress. If the already industrialized world wanted to preserve the long term health of the globe, it would have to pay the associated costs.

To fully grasp how such a confrontational attitude could have served as an impediment to any meaningful agreement, one must recall that the preparations for the Conference occurred approximately twenty years ago. Many of the developing countries had politically united as the "Group of 77." In addition, the philosophies which formed the basis for the New International Economic Order (NIEO), presented in 1974 at the U.N., calling for an equitable redistribution of world economic resources, had been formulated by many of the intellectual leaders of the developing world in the early 1970s. The North-South fracture which occurred only a month before Stockholm, at the UNCTAD conference in Santiago, Chile, over the terms of international trade and aid, demonstrated the fragile state of North-South affairs at the time and further magnified the usefulness of the extensive preparation for Stockholm.

A unified stance provided perhaps the most obvious power base for the developing countries. The leaders of these countries would have to be convinced that efforts to secure the world's environmental future would in no way interfere with their plans for economic growth. Without recognizing that the world's ecosystem was under strain, and their sincere support for Conference recommendations, an Action Plan would be useless. In addition, the developing world held the potential to cause enormous future damage to the environment. First, its population growth rates were high, nurturing fears of an "inevitable Malthusian population explosion" with the devastation that would accompany it. Second, the technologies easily available and financially affordable to the developing world at the time were antiquated and much more environmentally damaging than newer, more costly, technologies. If the developing countries saw no potential threat to using environmentally unsound technologies, and if there were no programs that encouraged technology transfer, it logically followed that the less developed countries would attempt industrialization in the same manner. Third, many of these countries, the most vocal of which was Brazil, had sovereign control over such ecologically important resources such as the world's rain forests.

At this point it is imperative to clarify that while Brazil and India were most adamant in their negotiating stances in the early stages of the Stockholm Conference, China had not yet been admitted into the United Nations. Therefore, in 1969, when the proposal to have a conference was decided upon, China was not included in the formal preparatory process. However, it was understood by many that China's membership in the United Nations would not be blocked forever, and if it became a member before the Conference were to take place, it might very well want to be an active participant. Strong had to take this into account and act accordingly.

U.N. Secretariat

The United Nations structure by its nature was in a position to influence the proceedings and shape of the Declaration, principles, and Recommendations. At the same time, past failures and excessive politicization of topics covered in previous U.N. forums, had caused it to lose its stature as an effective international body. A successful, 'action-oriented' conference would boost its faltering reputation, and perhaps revitalize an otherwise bureaucratic institution. U.N. Under secretary for Economic Affairs Philippe de Seynes initially appointed Moussard as Director of Studies of the Stockholm proceedings. The selection of the Conference head would be vital to the eventual success of the environmental negotiations. By the middle of 1970 it became apparent that Moussard would not be an effective leader, and U.N. Secretary

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General U Thant, with the support of de Seynes, replaced him with Maurice Strong in the last months of 1970, breathing new life into the Conference proceedings.

Strong was aware of the working of the U.N. structure, but he had never held a position of responsibility in the organization. His interest in the U.N. manifested itself when he was a young man. At 17, upon learning that the Atlantic Charter had been signed, Strong left his native Canada to go work in the United Nations. He soon discovered that his job as an assistant identification officer would not position him for the U.N. career he had hoped for and returned to Canada. There he became successful in the oil business, and at 23 went with his wife to East Africa to open up gas stations. While in Africa he became interested in development but had to remain in business because no development agency would hire him without a formal education. By 35 he had risen to President of the Power Corporation of Canada, and had earned the recognition of Canadian Prime Minister Lester Pearson who invited Strong to be head of the country's external aid office. Strong later would rename the organization the Canadian International Development Agency (CIDA). As Director of CIDA, he became acutely familiar with conditions and attitudes in the Third World.

Strong and his Secretariat staff had the advantage of being international civil servants. In theory such servants report to no nation's leader and therefore represent the interests of their international organization. In actuality, individual governments occasionally play a key role in the appointment of some high-level U.N. officials which can taint the objectivity of some individuals. Strong, with his convictions and independent job security intact, could afford to remain autonomous. Though some no doubt disagreed with his methodology, all felt Strong to be trustworthy, and sincerely interested in a beneficial outcome for all. In the beginning this trust was imperative; his integrity consequently gave him the leverage to act as a neutral go-between when conflicts arose in the negotiation process. Strong was also exceptionally energetic, needing little sleep, which pragmatically provided him the extra hours to continually appraise himself of Conference developments. He constantly emphasized win-win possibilities and common goals. In this way he lobbied for causes; taking no side and all sides at the same time.

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If this case study is to be used for simulation rather than for general discussion, the following roles should be assigned:

For the U.N. Structure:

1. Secretary General, Maurice Strong

For the Industrialized Nations:

1. U.S. delegate
2. Swedish President of the Conference
3. French (argues for nuclear testing)
4. Japanese Delegate (appeals to the developing world to avoid the mindless, unplanned development process that Japan experienced. Also argues for continued whaling of plentiful varieties.)
5. British Delegate (argues against any structural changes in the U.N. to accommodate the environment.)

For the Developing Nations:

1. Brazilian delegate
2. Indian Delegate
3. Chinese Delegate

Although recognized, sovereign states were the only Conference participants allowed to vote on issues, international, non-governmental organizations which were registered with the United Nations were given observer status and permitted to participate in conference discussion. Because their positions influenced governments' decisions, they, too, are also included in the simulation.

For the Non Governmental Organizations

1. A representative from a pro-environment NGO, Friends of the Earth
2. A representative from a pro-industry NGO, the International Chamber of Commerce.

Students involved in classroom simulation should keep two important points in mind. First, due to the fact that the Stockholm Conference on the Human Environment and its preparations occurred nearly twenty years ago, little information exists on specific negotiating stances of countries throughout the Conference. The vast majority of the negotiations on specific topics took place at the four official precom meetings. This limitation requires that the student take the logical negotiating position of his country on the topics addressed in the Declaration and Action Plan. Controversial topics at the time included: the relevance of underdevelopment, the effects of warfare and nuclear testing, and ocean dumping. The Declaration has been included in the appendix and a list of helpful documents is listed in the bibliography.

Second, the Stockholm Declaration's proclamation, principles and recommendations were non-binding. This allowed states to agree to statements they might normally disagree with if it committed them to specific action, and in many cases reflects a good will gesture to cooperate. Additional disagreements may arise when the consequences of principles or recommendations are opened to interpretation.

Precipitants and Conditions

As air, water, and land pollution came to be identified, the industrialized nations came to see degradation of the environment as a global phenomenon requiring research and corrective action. Preliminary findings shed light on the long term consequences of pollution, and the industrialized nations concluded that something had to be done to slow the rate of environmental deterioration. As was alluded to earlier, some foreign policy experts from the industrialized world, including George Kennan felt the only way the environmental effort could

be successful was if it were managed by the developed countries.⁶ Equal participation of the developing countries in the decisionmaking process was basically an unnecessary diversion, and the United Nations itself was inherently incapable of making the sort of difficult decisions required to mobilize a global effort. Both the North Atlantic Treaty Organization and the European Economic Community considered themselves better equipped than the UN to address the environmental problem. As neither of these intergovernmental organizations had representatives from the third world, their motives and possible solutions were suspect. Suggestions such as Kennan's were seen as little more than an attempt on the part of the industrialized world to actively interfere with the Third World's development program. As Peter Stone explained:

"If cleaning up the environment took the form of the rich countries cleaning up their own backyards and ignoring the poor countries (or even sweeping dirt over them), the gap between rich and poor would become even more marked than ever. Furthermore, the rich would soon discover that environmental considerations could provide a respectable cloak for behavior which is usually recognized as being just plain selfish. It was very clear that the Conference had to involve the developing countries in as practical a way and as quickly as possible. However most of them [developing countries] just didn't want to know."⁷

The United Nations, by its very structure, ensured that the environment would be dealt with in a multilateral forum. Whether or not that forum would be constructively used depended to a considerable degree on the good will intentions of the national representatives and the skillful management of the Secretariat. Jean Moussard, Strong's predecessor, was a scientist and felt the problem of safeguarding the environment was largely a scientific one. During his tenure excellent scientific data were secured and made available. But Moussard had little understanding of the political implications and complexities of a multilateral effort of this sort, though he seemed to be interested in them.

Maurice Strong, on the other hand, was an active pragmatist, a superb organizer and a person who had a keen appreciation of the political considerations at stake. His interest in the environment and the developing countries was well known. He also placed much emphasis on the value of personal contact and

⁶ George F. Kennan, "To Prevent a World Wasteland: A Proposal," *Foreign Affairs*, April, 1970 (vol. 48, No. 3), p. 401- 413.

⁷ Stone, *Did We Save the Earth at Stockholm*, p. 101.

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personal persuasion. He greeted every delegate warmly; yet he remained as neutral as feasible under the circumstances. If he needed additional finance or personnel resources he improvised and went directly to the source of assistance. He was seen everywhere and everyone, soliciting advice, not giving it. A number of the old line specialized agencies such as FAO, WHO or UNESCO, needed to be reassured that their turf was not being invaded. Strong was an expert at not only reassuring them but in enlisting their support.

He was always mindful of national delegations, particularly those with real technical expertise or real influence in the developing world. If a confrontation developed he was there. If feelings had to be assuaged he was there. He encouraged, he flattered and he kept the process moving. Basically Strong was in charge, not necessarily of the substance (he had lots of experience to help him on that area) but in the way things were managed. He was a master of improvisation and no one could doubt that he was the dominant, moving personality at the conference.

Philippe de Seynes appreciated the necessity of having an organizer in charge that understood the complete political implications of a conference of this magnitude. Whoever was to take the reins from Moussard would have to clearly understand both conflicting viewpoints from the North and the South and work to constructively meld both into one consistent philosophy on how to approach environmental preservation. Already existing scientific evidence created a sense of urgency in the industrialized world. The developing countries, for reasons already explained, were not convinced that actions to fight pollution would necessarily serve their interests. Instead they wished to focus on the methods of increasing their standards of living and eliminating poverty by augmenting the transfer of research and technology from the developed world. The LDCs agreed to participate in the Conference, but not until after Strong became Secretary General did many see the benefits to be had from negotiating. Up until this time, many developing countries had not come to the proverbial bargaining table. They had no tangible interest in pollution; their concerns hinged on development. It was Strong's role to meet with representatives of both the developed and developing world to convince them that their concerns and desires were complementary, not exclusive.

Maurice Strong's interest in the environment and in the developing countries was well known. When de Seynes asked him if he might be interested, Strong indicated that he would be if the appointment could be cleared with his government. Trudeau agreed on the condition that Strong would return to Canada after the Conference's conclusion. Strong officially took the position of Secretary General of the Conference in January of 1971. He started immediately to fill in the blanks left open by his predecessor. He got to know the

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Conference's financial constraints and began to put together a budget and a staff. Strong had three more PrepCom meetings before the Conference itself took place. The entire effort needed coordination and decisive leadership. He gave it that. "Perhaps the most important impact of Strong's succeeding Moussard as the dominant Secretariat figure was that the conference was no longer essentially a scientific review; it was now a *political* exercise with persuasive scientific backing. Given the extraordinary array of actors and the economic variety of environmental concerns that had to be dealt with, this is the only formula for success."

Question One.

You are now Maurice Strong. You have recently taken responsibility for the United Nation's Conference on the Human Environment and you have a year and a half before it is to take place. It looks doomed to failure because of lack of early organization, and more importantly, lack of interest on the part of the developing world. LDC participation is crucial to the success of any worthwhile, multilateral outcome.

How will you get all parties to actively participate in the Conference? That is, how would you strive to convince all parties that it is in their best interest to work together to preserve the global environment?

What is your plan?

PRENEGOTIATIONS: DIAGNOSING THE PROBLEM

In February of 1971, one month after he officially took office, Strong felt it was important to meet with a small group of experts to advise him as to where he was going, and how he should plan for such a conference. His associate and friend, Carroll Wilson at MIT, assembled a group of five or six persons, including Peter Thacher of the U.S. Mission to the U.N., and Jay Forrester and Dennis Meadows of "Limits of Growth" fame, and they spent a few days at MIT setting a purpose and direction to Strong's efforts.

In Strong's own words: "I'd like to work back. Right after the Stockholm Conference is finished, for two minutes maybe, I'll have the ear of the world and they'll be asking me, what did you accomplish? What did you do?"

and I'd like for you, [referring to his associates] to help me decide what I'd like to be able to say." He discussed what the plausible and desirable output of the Conference might be, and then looked back to see how they were going to achieve that outcome. Again, according to Strong, "Basically, ...our objective was to entrench the issue of the control of the environment with the economic-development process, both in developing and industrialized countries."⁸ At the MIT meeting they coined a slogan summarizing what they saw to be the distinct mission of Stockholm, "to protect and enhance the environment for present and future generations."⁹

From the very outset, Strong was confronted with a fundamental dichotomy that emerged in the preparations for the Conference: on the one hand, the developed countries believed the environmental problem was really a problem of pollution, principally affecting them; on the other, the developing world felt the environmental problem was one of poverty and lack of resources, and that the concern for cleaning up the environment was no more than a plot to retard their development. Faced with this antagonism, Strong realized that somehow he had to bring the two concepts together, and to make both sides understand that the problem was not purely environment, but one of environment and development. In practical terms, the developing countries had as much at stake in a successful conference as the developed countries.

The next step was to prepare a game plan complete with an agenda to achieve this aim. Strong was anxious to get as much information as possible as to what already existed, to determine what expertise there was. In March of 1970, prior to his installation as Secretary General, first of the PrepComs had taken place. In the beginning of Conference preparations, the Secretariat had requested a "national report" from each of the countries that intended to participate. Every country was asked to give an account of its own internal environmental situation. National reports became one of the most effective instruments used to increase the awareness of countries' individual environmental concerns. In fact, over eight-five of these reports were received by the Secretary General, even though a number of countries had never even heard of the environment or had ever considered it a matter of national concern. Faced with the prospect of having to develop a national report and some environmental

⁸Maurice Strong, interview held at the Metropolitan Club, Washington, D.C., March 29, 1990.

⁹Peter Thacher, interview held at the World Resources Institute, Washington, D.C., February 12, 1990.

expertise, countries initiated a process which frequently led to the establishment of an environmental ministry or directorate, or some institutional mechanism that was aware of what the country was doing in this field. This process gave environmental scientists recognition in their own countries where frequently they had had virtually none. To reinforce this new-found recognition, Strong raised money from governments and foundations to finance the travel of developing country experts to Geneva and get the benefit of their advice throughout the preparatory process. In turn, these experts had standing to try to persuade their own governments to attend the conference. In an initial effort to clarify the importance of program reflecting the interests of all participants, in February of 1971 Strong and his associates at MIT came up with a broad agenda which was to be officially adopted by the second prepcom later that same month. The schedule would cover the following six areas. It had already been agreed that the Declaration should contain broad language describing why it was important to preserve and enhance the human environment, and this to be followed by a number of principles with respect to the environment that deal with man's obligations to care for his environment. Three principles are well phrased and, principal 21, in particular, is constantly quoted in the literature and in legal proceedings dealing with problems of trans-boundary pollution. In essence, states can exploit their own resources, pursuant to their own environmental policies, but they also have the obligation to ensure that their activities do not cause damage to the environment of any other state or to areas beyond the jurisdiction of any state. In the view of a number of scholars, principle 21 has already attained the status of Customary International law.

After the declaration comes the Action Plan for the Human Environment, broadly divided into three major categories: those recommendations dealing with assessment functions, grouped under the broad description called "Earthwatch"; environmental management activities; and international measures to support the national and international actions of assessment and management.

Specifically the conference developed 109 recommendations for action at the international level, directed to one or another Specialized Agency of the United Nations for action. The first broad area is that of the planning and management of the environmental quality of human settlements, where problems of housing, transportation, weather, sewage and public health are a matter of major concern. The main Specialized Agencies concerned with this are the World Health Organization (WHO), the Food and Agricultural Organization (FAO), the International Labor Organization (ILO) and the Center for Housing, Building and Planning in the UN.

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The second major area of concern are the environmental aspects of natural resource management and the FAO is the organization with primary responsibility for action proposals. Such areas as soil degradation, soil and water conservation, waste disposal and recycling, pest control, reduction of the harmful effects of agricultural chemicals, forests and forest management, a moratorium on commercial whaling, integrated aspects of national parks and planning, genetic resources, fishing resources, regulations to avoid the discharge of toxic chemicals, etc.

Of great importance to the developed world, of course, was the third category of action proposals: identification and control of pollutants of broad international significance, particularly those producing appreciable risks of deleterious impact on climate, the release into the environment of toxic and dangerous substances, the establishment of relevant standards of the control of these pollutants, the establishment of an international registry of data on chemicals in the environment, including radioactive pollutants. In order to monitor these pollutants effectively, the establishment of ten baseline stations is recommended, to be set up in areas remote from all sources of pollution in order to monitor long term global trends. The establishment of a much larger network of a 100 stations is advocated for monitoring regional atmospheric changes. Clearly, the World Meteorological Organization and the World Health Organization have a major stake in these recommendations. Also to be established is an International Referral System, so that information with respect to any source of pollution or its control mechanisms can be made universally available.

There is, of course, a heavy emphasis in this category on marine pollution from land-based sources, from ship operations at sea, and from ocean dumping. A variety of international organizations such as the Intergovernmental Oceanographic Commission (IOC) and the Intergovernmental Maritime Consultative Organization (IMCO) are charged with taking early action to adopt effective international measures "for the control of all significant sources of marine pollution including land-based sources, and to concert and coordinate their actions regionally and where appropriate on a wider international basis."¹⁰

In essence, governments and a variety of international organizations, primarily specialized agencies, are asked to consider human settlements, natural

¹⁰ SOURCE: to be added before publication

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resources and pollution as a means of assessing the state of the environment and to make recommendations as to what might be done to prevent its degradation.

The last three categories of action primarily involve environmental management information and finance, including educational, social and cultural aspects of environmental issues, economic development of the environment, including environmental policies as a component of comprehensive planning in developing countries and international organizational implications of proposals for action.

All recommendations would fall under one of the six categories. The varied agenda items made it evident that the Stockholm Conference would not be limited only to the control of pollution but would intimately relate to the concerns of the developing countries.

In order to bridge the gap in understanding between rich and poor nations, Strong then conceived of bringing together thirty or forty intellectual leaders in the area of environment and development, primarily from the developing countries, to let them discuss, argue, and then thrash out a statement on the environment-development relationship that was intellectually sound and supportable. He found his meeting place, a small hotel in a town called Founex, not very far from Geneva. The report that came out of this rather bruising process of negotiation was a document that in some ways was as important as anything that was subsequently produced at the Conference itself. The letter of transmittal to the Secretary General of the U.N. opens with a very revealing paragraph: "We herewith present our report on development and environment. The report attempts to place the growing environmental concern in its proper developmental perspective in the context of the urgent and pressing needs of the developing countries."¹¹ This, in essence, summarizes precisely what Strong had been striving for and in Strong's own words, the Founex report "provided me with the basic policy angles that I needed to bring these issues together at the political level in our preparation for the Conference and to get the developing countries interested."¹²

¹¹ Ecole Pratique des Hautes Etudes (VIe Section), *Development and the Environment: Report and Working Papers of a Panel of Experts Convened by the Secretary General of the United Nations Conference on the Human Environment*, United Nations, Founex, Switzerland, June 4-12, 1971.

¹² Maurice Strong interview, March 29, 1990.

The Founex Report became the focus of discussion at a series of regional seminars on environment and development convened by economic commissions in Addis Ababa, Bangkok, Mexico City, and Beirut. These meetings were co-sponsored by the U.N. secretariat and dominated by representatives from the developing world. The regional conferences acted as bellwethers in determining whether or not the governmental representatives of the developing nations had accepted the premiss that development and the environment were inter-related. Auspiciously, some participants from developing countries claimed that their countries, too, suffered from the same ailments caused by pollution as the industrialized countries. Such declarations identified pollution as a problem in addition to development, and signaled the developing world's interest in acting to protect the environment.¹³

To strengthen the political aspect of his policy, Strong hoped to rally early conference commitments from as many high-level officials as possible. Knowing that Mrs. Indira Gandhi was one of the most respected spokesmen in the developing world, he went to India soon after his meeting at MIT. He had met Mrs. Gandhi at an earlier time through his Canadian CIDA connections and had personal friends close to the Indian Prime Minister. He was told that he had no chance of seeing her since her country was involved in a war at that time with Pakistan; nonetheless, typical of Strong, he persisted, got to see her, and asked her if she would come to Stockholm. She agreed on the spot, a year and a half before that Conference was to take place. The very fact that he could speak of her pending arrival during his discussions with other developing country heads of state made a great deal of difference in terms of ensuring others' serious participation. She was an important symbol as the leader of the second largest and perhaps most influential country in the developing world at that time.

Despite the extensive effort to bring the developing world into the Conference, Strong never neglected the developed world. After all, it created most of the pollution (and it had the money!). He asked Robert Anderson, president of the International Chamber of Commerce, to introduce him to the business community in the U.S. Carroll Wilson of MIT arranged for top professionals to assist in organizing the Conference, and from a political point of view, he felt it important to get to know Howard Baker, then a Republican Senator from Tennessee who had considerable influence in the U.S. Senate itself. Senator Baker agreed to head up a Citizens Committee concerned with the environment, and the committee members toured the U.S. mustering enthusiasm for

¹³ Stone, *Did We Save the Earth at Stockholm*, p. 109.

Stockholm. Strong himself flew to capitol cities all over the world, not once but twice, seeing government officials, urging them to come, urging them to commit.

PROCESS: FORMULA

By the end of the 1960s, well before the Stockholm Conference took place, two camps had emerged concerning the environment. Put in simplistic, generalized terms, debate in the developed countries favored environmental preservation through implementation of policies based on no-growth economic philosophies. Conversely, developing countries favored development and leaned toward "growth at the cost of the environment" policies. The challenge of reconciling these legitimate concerns had to be met before any agreement would be approached. The formula for Stockholm's success emerged from the MIT meeting: environment and development. Implementing the formula began in Founex. All countries had to be convinced that development strategies should continue and environmental factors should play an integral part in those strategies. By the time the synthesis between environment and development had taken hold, the success of Stockholm hinged on political details. Maurice Strong convinced states to accept the formula and then concentrated his efforts on making the details fall into place.

He frequently has used the phrase "process is the policy" when asked how he structured the Conference, thus implying that the process leading up to Stockholm might in the long run have more impact on the results than the Conference proceedings. To use his own words:

what you do to help the process is both substantive and political. You get the best expertise, but you also realize that the decisions are taken in a political context and therefore you keep a constant interaction between the professional and the political processes so that the issue, by the time it gets to the point of decision, has already ripened by the process itself. You don't dilute the professionalism, but you constantly work to check out the professionalism and the political dynamics so that you're bringing people along through the process. You're not presenting them with a document and asking for their reaction. By the time you've finished, you've produced a professional product which you know is reasonably liked and politically acceptable.¹⁴

¹⁴ Maurice Strong interview, March 29, 1990.

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Strong's preparations for the Conference illustrated this methodology. He established three levels of proposals to be considered by the conference according to their degree of preparation. The first of these were simply ideas that had not yet taken any shape but which promised, after a period of time, to be successfully developed and implemented. The second level of those proposals was pretty well structured but the proposals were still not in final shape and might require a convention or some other form of finalization following the Conference. The third level consisted of the international environmental issues for which there seemed already enough political and scientific understanding to warrant a fairly specific and concrete recommendation that could then be acted upon at the Conference itself. For example, one of the study committees set up by the Secretariat dealt with the whole problem of ocean pollution outside of the Conference but then submitted its draft report for the review of experts at the Conference itself. The result was the negotiation of the London Ocean Dumping Convention shortly after the end of the Conference in 1972.

Another example was the establishment of an Intergovernmental Working Group of governmental and private sector experts which produced the basic concepts and implementation of a global environmental monitoring system (GEMS), one of the Conference's major accomplishments.

In essence, information and advice is collected from all sources, both within the conference structure and outside of it, and the totality of this information is brought to the development of a policy itself. Strong established extensive networks both within the immediate conference structure and outside of it and the information thus acquired in particular areas was refined and developed into specific proposals. He also worked to coordinate efforts by those individuals and organizations active outside of the U.N. structure, thereby expanding the range of possible accomplishments associated with the official negotiations.

Given the number of participants, and the broad range of topics encompassed under the umbrella of "the environment", the amount of written information submitted to the Secretariat pertaining to some aspect of the Conference was phenomenal. Informational inputs included national reports, basic papers from experts within the U.N. specialized agencies (which often offered biased suggestions), case studies on particular aspects of environmental problems, reports from Intergovernmental Working Groups (IWG) on specific topics, and reports of meetings from numerous non-governmental organizations. The totality of this "process" - a pile of resource material in 20,000 pages measuring ten feet high, the result of submissions from national and

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international experts from all over the world - by its very nature has a major influence on policy.

Strong sincerely believed that all delegations should have access to, and digest, all pertinent facts. He knew that no conference participant could be responsible for the 20,000 pages of basic materials. In addition, the time and cost - not to mention trees - it would take to duplicate the information was phenomenal, but it was imperative that all countries be well-informed.

Question #2.

You are now Maurice Strong. Your professional staff numbers no more than fifteen people, inadequate to digest and summarize the plethora of facts into one single document capable of being read by all Conference delegates. How would you ensure that delegates receive needed information, in the most impartial, efficient manner possible?

An Indian Professor, Shiv Gupta, designed a system to code each submitted paragraph categorically. He hired ten graduate students to analyze the documentation, and consolidate the facts. Though the system had some faults due to coding subjectivity, it served the purpose of consolidating information, omitting subjective opinions aimed at politicizing the exercise, and it focused delegates on the most pressing issues.

Exemplar of Strong's information philosophy was his use of materials provided by the U.N. specialized agencies. Strong always took advantage of what these agencies had to contribute to the Conference. However, he set a precedent in the Stockholm preparations by altering the way in which these organizations contributed their expertise. At prior conferences and before Strong's arrival, a subcommittee of the U.N.'s Administrative Committee on Coordination (ACC) had directed that the U.N. agencies submit the basic papers for Stockholm that dealt with their area of expertise directly to Conference participants. One of Strong's first decisions as Secretary-General was to cancel the ACC procedure and have all Stockholm papers originate from his own office, thereby including the Specialized Agency reports in the consolidation process. As explained by Richard Gardner:

The Specialized Agencies thus made their contributions to Strong's Secretariat rather than directly to the Stockholm Conference. In this way Stockholm was launched with a strong unifying perspective and without the self-serving parochialism so characteristic of activities in other areas.¹⁵

In an attempt to be as thorough as possible, Strong and his staff established, perhaps as early as the MIT gathering, an "Action Plan" that divided the substantive proposals falling within the six areas previously described, into three levels. The first level included subject areas that from a conceptual point of view were not in any shape for immediate action. Secondly, there were those "level two" subject proposals that would be considered and discussed at the Conference and perhaps be in shape shortly thereafter for definite action. The last area, "level three", as it was called, consisted of action-oriented proposals and plans that had been completed prior to, or during, the actual Conference and which were clearly visible to all as representing specific accomplishments. Strong felt that signs of real progress embodied by "level three" initiatives would give concrete substance to the "Action Plan" and sustain a positive momentum on the less tangible issues which fell into the "level one" and "level two" categories.

Question #3.

If you were Strong, what would you do, whose effort would you enlist, to ensure that a few substantive, binding, "level three" measures could be agreed upon by the end of the Stockholm Conference?

¹⁵"U.N. Conference on Human Environment: Preparations and Prospects." Hearings before the Committee on Foreign Relations, United States Senate, 92 Cong., 2nd sess., May 3, 4, and 5, 1972, p. 85.

Very much related to the idea of "process is the policy" was the Secretariat's use of a "parallel process". Thacher captures this concept in his explanation of the procedure of going outside the intergovernmental mandate to achieve Conference objectives.

My initiation to this concept, which says in essence that if you're drilling a hole from a mountain, you don't drill from just one side of the mountain, you drill it from both sides of the mountain and you try to meet in the middle, came at the outset of my relationship with Maurice. This was going outside of the intergovernmental mandate and responsibility that we had as a Secretariat to get innovative ideas which then as a Secretariat we could convey into the intergovernmental machinery.¹⁶

Strong knew that there was a great deal of environmental expertise already available. Talents that had never before been pulled together were recruited to shape a coherent and achievable work program of "level three" agreements. This was the concept behind Intergovernmental Working Groups (IWGs) and Task Forces. There were two kinds of working groups: those that consisted of governmental participants and those that were appointed by Maurice Strong himself. In forming the latter he felt free to go outside the governmental structure to get the kind of expertise he believed necessary. Through the Secretariat Staff, the products of these two groups were melded to achieve a final recommendation. This structure was beneficial in that it permitted Strong to call on the expertise of *any* individual capable contributing to the effort, thus nurturing new ideas and innovative suggestions. In the early stages of the Conference preparations, many of those ideas - though perhaps technically brilliant - would have been rejected as politically infeasible and therefore useless at Stockholm. However, because national delegations also served on these IWGs and Task Forces they had an opportunity to weigh all suggestions against domestic political constraints, thus avoiding surprise objections at a later date.

The IWG concerned with ocean pollution visited London, Reykjavik, and Ontario, and on the basis of its deliberations, drafted a document which became the catalyst for the adoption in 1972 of the London Ocean Dumping Conference. Other examples of the parallel process, which occurred outside of the Conference framework included: a draft convention negotiated on trade in endangered species and adopted in 1972 at the Conference on International Trade

¹⁶Peter Thacher interview, February 23, 1990.

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and Endangered Species (CITIES); four conventions relating to conservation drafted primarily by the International Union for Conservation of Nature and Natural Resources (IUCN), one of them providing for a World Heritage Trust to preserve natural and cultural areas of great importance to humanity; and, constant recourse to the scientific community for advice on a number of problems, notably environmental monitoring, provided by the International Council of Scientific Unions (ICSU), through its Scientific Committee on Problems of the Environment (SCOPE).¹⁷ Furthermore, there were networks of participation through the various regional organizations. This continuous process of involvement was illustrative of Strong's "process is policy," and as a preparation for the Conference it worked well.

Strong was particularly anxious that a few basic principles of environmental law be established in a universally accepted document, and to this end he recruited a task force of international lawyers to develop proposals for what would become the Declaration on the Human Environment. As previously discussed, Strong was certain, as a result of the MIT meeting and subsequently, that pollution could not be the sole concern of the Conference; that pollution was not essentially an urban problem largely confined to the developed nations, but that environmental degradation permeated all nations, and was also a special problem for the developing nations. It would be the responsibility of the Declaration task force to incorporate this central realization into enduring language.

As a consideration separate from "working groups", Strong was convinced that industry, which after all played a critical role in the whole pollution problem, was not sufficiently involved in the proceedings of the Conference. In an attempt to rectify this, he arranged to review everything that had gone on thus far at the Conference at meetings with the International Chamber of Commerce (ICC) in Paris. He emphasized how important it was for the private sector to play a supportive, non-adversarial role, in this major effort to address the environmental problem. He asked for the specific help of the Chamber on a number of proposals, which, in fact, it gave. In addition, the ICC made its presence known in Stockholm and provided very useful insight to the understanding of the role of business in dealing with the environment.

¹⁷Hearings before the Committee on Foreign Relations, United States Senate, 92 Congress, second session, on Preparations for and Prospects of the June 1972, U.N. Conference on the Human Environment, pp.84-85.

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Also as part of the "parallel" process, Maurice Strong made maximum use of the energy and clout of the Non-Governmental organizations (NGOs) at Stockholm. The NGOs embodied all the various concerns of the entire environmental movement; the majority came from the United States, although there were also a good many from other countries. They constituted the strong citizen input to the Conference itself. There were perhaps more NGOs at Stockholm than had ever been present at any other major U.N. undertaking. Their numbers were in excess of four hundred, and the task of getting them organized in a fashion roughly parallel to, and supportive of, the regular preparatory work was a major challenge, as each NGO had its own agenda. Nonetheless, the challenge was met by the Secretariat Office under Mark Nerfin, Strong's Chef de Cabinet, and particularly by Barbara Ward, who organized a daily briefing session, arranged tickets for Conference discussions, and recruited speakers. Strong raised money to allow the NGOs to develop their own recommendations to the PrepComs, and he supported financially such entities as "Friends of the Earth", an American NGO, and the British magazine, the "Ecologist". Conference daily paper, *The ECO Forum*, provided invaluable assistance in reporting for everyone what was happening from day to day. It was supported entirely from private sources.

How influential the NGOs were with governmental delegations at Stockholm, many of whom were totally unfamiliar with this species of civilian activity, is hard to know; probably not very. One thing the NGOs did accomplish at the Conference, however, which everyone remembers in detail, was to create a huge papier-mache whale which was paraded through Stockholm to solicit support for a ten-year moratorium on whaling, a proposal which, unfortunately, the whaling nations would not accept. However, the involvement of the NGOs on a "parallel" track, operating outside the traditional and established U.N. procedures, frequently was extremely effective in stimulating public opinion, and thus political pressure from home. As put by Strong, "You can't expect politicians to act if they don't have a public supporting them."

Early on, Strong knew it was necessary to capture the imagination of the public, and at least to get the public to understand generally why the environment was such an important issue and what was being undertaken to do something about it. The work of the NGOs did much to amplify the importance of the Conference, and Strong himself, given his perceptive exhortations must have increased awareness of environmental issues in the world community. It seemed that a book about the effort and about the environment was a necessity, and would exemplify what the Conference was all about. Strong went to see the U.N. publications office about this, and was told flatly that the decision had already been made that there would be no book in connection with the

conference. Never daunted, Strong thereupon persuaded two eminent authors and environmentalists, Barbara Ward and Rene Dubos, to write such a book, and he created a small foundation to publish it. The book was entitled *Only One World*, was in fact published and became a best seller in twelve languages.

This entire effort was handled unofficially and was illustrative of the way Strong operated when something needed to be done. He had no desire to avoid using the bureaucratic machinery that existed at the U.N.. On the other hand, he did feel that, in order to make the Conference a success, to really accomplish something, he might from time to time have to go outside the traditional channels, devise new methods and means of accomplishing results, and if he transgressed establishment rules, so be it. Of course, he relied on some very useful individuals and organizations within the U.N. whose expertise and experience could contribute to the preparations. The WMO, the WHO and from time to time the FAO all Specialized Agencies of the U.N., were particularly helpful in this respect.

To quote Peter Stone, "suffice it to say that just about everyone or at least everybody that seemed worthy of consultation had a chance to provide some input to the Conference."¹⁸

PROCESS: CLOSURE

As the actual Conference approached, the efforts initiated by Strong and his Secretariat had seemed to work well to prepare all Conference participants for the events of Stockholm. The IWG on the Declaration had come up with a draft document, 113 countries - many of whom were developing countries - had agreed to participate, and an "Environmental Forum" which was sponsored by Sweden and made up of Non-governmental Organizations not directly involved in the negotiations would take place concurrently in another section of town. All had run smoothly when two non-related events threatened to jeopardize the Conference's final outcome. The first was the realization that East Germany would indeed be barred from the Stockholm Conference, and this omission might lead to the refusal of the entire Eastern Bloc to attend. The second, ironically, would be the acceptance of the People's Republic of China as a member of the United Nations, and its subsequent participation in the final events at Stockholm.

¹⁸ - Stone, op. cit., p. 25

As Stone has pointed out, "Stockholm was a political conference largely because it needed politicians to agree to certain activities and to spend certain sums of money." Since virtually all delegations that came to Stockholm had placed a fairly senior minister in charge (there were not very many Ministers of the Environment at that time), it was unrealistic to think, as many environmentalists did, that the deliberations of the Conference could be kept strictly to the destruction of the natural resource base and environmental degradation.

The issue of East Germany's participation was the first political question to threaten the success of Stockholm. Six months before the Conference was to take place, during a meeting of the General Assembly in December of 1971, the United Kingdom proposed, at the request of the Western countries, that the Secretary General of the Conference issue invitations only "to members of the United Nations and its specialized agencies."¹⁹ This came to be known as the "Vienna Formula" and it meant that East Germany, a member of neither, clearly would not be issued an invitation to the Conference; on the other hand, West Germany, which was not a member of the U.N. but was member of UNESCO and one or two other U.N. Specialized Agencies was eligible, and hence, would be admitted to the Conference. The political justification behind the exclusion of East Germany was that the Western states did not want East Germany to enhance its status until it had signed an international treaty establishing the precise nature of its relationship with West Germany. The treaty was under negotiation at the time and the Western insistence on imposing the "Vienna Formula" at Stockholm was designed to put pressure on East Germany.²⁰

Reactions were predictable. The Soviets and the Eastern Europeans were faced with a serious question: whether to stay with the Conference preparations (Russia and Czechoslovakia were members of the PrepCom) since in their view, and that of many others, the environment was a subject of universal concern. It was pointed out that not only was East Germany a major polluter, but that most of the practical preparations for the Conference had been completed with the full participation of the Socialist countries. Ironically, when it came to environmental issues, the Eastern Bloc and the Westernized countries were largely in agreement. It was not known until the final days before the

¹⁹General Assembly Resolution 2850 (XXVI).

²⁰"Stockholm Stumbles Over Two Germanies," London Times, 26 May, 1972, p. 19.

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Conference began, whether the exclusion of East Germany would, as a matter of principle, keep all of the Eastern Bloc countries from participating at Stockholm.

East Germany and the entire Eastern Bloc had a real stake in the deliberations. After all, a year before, Czechoslovakia had to downgrade its major environmental policy conference in Prague, sponsored by the Economic Commission for Europe, to an "informational symposium" to maintain East Germany's participatory status. Delegates were invited as "experts" and not as official representatives of their countries. Strong wished at all costs to avoid an analogous situation at Stockholm as it would have greatly reduced the Conference's stature and effectiveness in a new area of universal concern.

As the Stockholm Conference approached, the East German issue became increasingly tense. Efforts were made to somehow get the East Germans invited into a specialized agency, any specialized agency. The environmental citizenry of most countries implored their delegates to make the Conference a universal one. Strong did his best, but the question of who would attend the Conference was not his responsibility. In fact, the month before the Conference took place, at Strong's urging, the delegates of WHO did vote on East Germany's membership. All of this, however, was to no avail. East Germany lost the vote at WHO, relations became more and more strained, rumors multiplied and there seemed considerable concern that the Soviet Union and Eastern Bloc might in fact pull out of the preparations. The confrontation itself however, produced one beneficial effect: marvelous publicity. The worse the conflict got, the greater the interest generally in the Conference itself! As Stone points out "the situation became increasingly ironic in that the more likely it seemed that the Conference would blow up and sink, the more its fame spread and the greater became people's hope for its success."

If you were Strong, what would you do ensure that the East German situation would not threaten the proceedings of the Conference?

In response to the situation, Strong immediately hopped into a jet, and decided to go see everybody - all over the world - once again. After touching base personally with all of the concerned participants, he was able to announce on February 21, 1972 that notwithstanding "speculations in the press, the Stockholm Conference would take place on schedule and as planned." However,

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it was also clear that neither the Soviets nor the East European countries would in fact attend the Conference.

All of this, although it seemed very serious at the time, really did not amount to much. Strong kept the Soviet Ambassador to Sweden fully informed each day as to what was happening during the preparations and the Conference itself. As a matter of fact, Strong's senior scientific advisor, the Soviet Professor Kunin, continued to work right through to the end of June with the Secretariat, two weeks after the Conference itself was ended.

Apart from the North-South confrontation, which in large part had been laid to rest by the time of the Conference, the other major political concern was China's involvement in the Conference and the role it might play. It may be recalled that mainland China, the Peoples Republic of China (PRC) was not authorized to represent the Chinese nation in the U.N. until late in 1971; thus its participation at Stockholm was delayed until just weeks before the Conference itself began.

Question #4

There was great concern that the PRC might attempt to seize the leadership role for the Third World, exacerbating difficulties that already existed between the North and South, and perhaps jeopardizing the Conference outcome.

If you were Strong, how would you try to minimize the PRC's potentially adversarial role?

Anticipating in 1971 that the PRC might be recognized in time to participate in the Conference, Strong and Peter, his program advisor, who had had considerable experience with the China problem while he was a member of the U.S. delegation to the U.N., found an Austrian who had come to know Premier Chou En-lai while he was a student in Vienna. Thacher and Strong therefore took the opportunity to feed documents dealing with the preparations for the Conference to the Austrian, who in turn passed them on to Chou. Thus, by the time mainland China was formally recognized, it was clear that its key personnel had considerable background on what was taking place.

Sharing information with China did not, however, eliminate the threat it posed as a participant. It was a major power, a leader of the Third World, and in a position to be very disruptive. Yet, it was only after the actual Conference began in June, 1972 that the Chinese decided to interrupt the proceedings of the Working Group on the Declaration. The Working Group was in fact the 27-member Preparatory Committee, and had spent eighteen slow and painful months reaching consensus on this key document. Notwithstanding, the Chinese formally proposed that the draft declaration be sent back into committee, thus forcing new discussion on the entire issue. In the end, only after a week of intensive negotiations with the Chinese was it possible to get a draft that appeared to satisfy the Chinese delegation. However the delegation had orders from Peking not to make concessions outside of its mandate, and because of communications difficulty, the head of the delegation had no way to get approval of the final draft from Peking. He was thus forced to indicate that he could not support the Declaration and therefore, it would be impossible to reach a consensus on the Conference itself. Notwithstanding, Strong decided to meet with the Chinese delegation every morning at breakfast to discuss the events of the day and he usually made a suggestion as to how they might react that day to particular points that might come up. Strong never knew whether they would follow his advise, although in point of fact they tended to do just that.

The crunch, however, came the very last day of the Conference. When faced with the possibility that the Chinese might actually walk out, since they had never received approval of the Declaration from Peking, Strong devised a strategy that he thought might work. As he reports it himself, he said to the head of the Chinese delegation, "if you can't get instructions, when it comes to the approval, why don't you just skip, step out of your front seat and just sit in the back of your delegation. Don't walk out, don't vote yes, no, or abstain, and we will record that the Chinese were present but did not participate in the vote and therefore we brought a consensus."²¹ Of course the Chinese could not formally agree to this prior to its actually taking place, but when the vote did come, the delegation followed the precise instructions that had been suggested by Strong, thus avoiding the destructive veto.

²¹ Strong interview, March 29, 1990.

PROCESS: LEVERAGE

It should be pointed out at the outset that Strong had no leverage in the conventional sense. He was not in command of one of the key delegations whose involvement was essential to the success of the Conference, he had no resources of his own in terms of money or particular strategic influence, and the only clout he had was what he derived from his own position as Secretary-General. Despite all this, Strong knew that both sides wanted a successful conference and this knowledge was a key element to the leverage he could exercise. Also, and this is most important, he had the trust of both sides, both the developed and the developing countries. This trust had been built up as the result of endless hours of personal discussion and attention to the leaders of both sides. Both sides also knew that in certain situations, Strong alone could manage a compromise and bring the two sides together and that, in his absence, the situation would remain irreconcilable. Strong knew precisely his own limitations as Secretary-General and also what he could get away with. He always armed himself with the facts, knew them better than perhaps anyone else, and in addition, his sense of intuition told him when he could best exercise such leverage as he had. On numerous occasions his unique position allowed him to manipulate the situation to the benefit of all parties, a particularly difficult but effective ploy in the midst of a multilateral negotiation. No single delegate could have accomplished it. Because the participants trusted him he could negotiate a compromise or break an impasse.

His influence over the Conference outcome can best be demonstrated by conveying three additional events in which Strong made decisions that no state representative could have attempted, let alone execute. The first concerns the way Strong, having just taken over the reins from Moussard, convinced senior U.N. offices and national delegates to adopt his own revised agenda. The second relates to Strong's method of coaxing the developing world into the preparatory process, and the last deals with the way Strong maneuvered the entire Conference assembly out of a negotiating stand-still the night before the Conference was to end.

As has already been discussed, soon after Strong accepted the position of Secretary General, he and a small group of experts at MIT reevaluated the progress of the Conference and decided on a tentative forward agenda, having in mind that Strong's official role in a conference was to carry out the requests of the delegates. In Strong's words, "the Secretariat never challenges the supremacy of governments." However, carrying out his mandate involved to some degree his interpreting the wishes of the delegates in such a way as to improve upon the

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system that had been put in place before his arrival. Some time between the second and third PrepCom meetings, an informal meeting was called to give Strong the opportunity for the first time to present his views to all delegations. Consistent with his philosophy that a Secretary General should not blatantly challenge governments positions, Strong played the role of "innocent newcomer." He reviewed the work that had been done over the last year and a half, and tried to discern from that work what he understood his instructions to be with respect to the Conference. In his own words he asked the representatives, "I need to know [your views], I'm the new boy, whether I'm right, whether I've read it right." Thus, he outlined a program which he felt reflected what they wanted him to do; in reality it reflected what he wanted to do. The program was greeted with great enthusiasm, and everyone seemed satisfied that their ideas had been incorporated into a powerful agenda.

The following anecdote illustrates Strong's ability to unobtrusively persuade delegates to consider proposals or actions that they might otherwise oppose. One of the most articulate individuals in expressing these concerns of the third world was Mahbub ul Haq, a Pakistani who subsequently became head of policy planning for the World Bank. Mahbub ul Haq attacked the project as another ruse of the rich to deflect attention from the real concerns of the poor. Strong put forward a new perspective. He posited that the environment and development were intrinsically related because it was through the development process that the environment must be protected, and it was through changes in the development process that the environment would be improved. If this were the case, then a whole new set of energies would embrace the development issue. Strong asked Mahbub ul Haq:

"Will you do me a favor? The issues are so important... would you be willing to participate in an objective process to look at these issues? ... Because I need to know if I'm on the right track, and if I'm not, I'm in the wrong job."²²

Mahbub ul Haq then agreed to go to Founex, and the reconciliation of development and the environment began.

The closing stages of the Conference served to bridge the differences of the developing countries with the industrialized nations. As related by Stone,

"In the final throes over the conflict over the Declaration, for example, the calmly positive attitudes of the vast majority of the developing countries

²²ibid.

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were a major influence in reconciling the attitudes of the big powers. Some people saw this as a purely personal affair - the developing countries were repaying Strong for the hard work he had done on their behalf."²³

Stone goes on to say that the Declaration was adopted at Stockholm because the developing countries thought it was in their interest that it should be. However, even if the importance of the issues far exceeded Strong's personal influence over the outcome, it is clear that Strong was a major influence in the entire process.

The last example of Strong's leverage demonstrates his ingenuity and willingness to take risks to alleviate negotiating impasses. As mentioned earlier, in the last days of the Conference passage of the Declaration was still in serious question. On June 14, 1972, the Conference newspaper ECO reported, "...with the usual reservation about miracles, the Declaration must now be regarded as dead."²⁴ China had forced the draft declaration back to a closed Working Party four days before and enough controversial amendments had been proposed to lead many to believe last minute compromise to be unattainable. The situation continued through the early morning of the final day of the Conference. It was late, around 4 a.m., people were tired, and no one was in the mood to make concessions. Strong felt the need to break the mood, to set a proverbial fire alarm, to bring people out of their slump and startle them into making the final efforts necessary to reach their goal. He looked around the room and found that "fire alarm." As Strong relates,

"...I got an inspiration and pulled the plug on the translation equipment so that all of the sudden everything went off and that shocked people and galvanized them, and in the next half-hour we got an agreement."²⁵

This unorthodox procedure could have backfired, but in the end, it may very well account for the successful agreement on the Declaration!

²³Stone, *Did We Save the Earth at Stockholm?*, p.117.

²⁴*Stockholm Conference ECO*, jointly produced by the *Ecologist* and Friends of the Earth, June 14, 1972, p.1.

²⁵Maurice Strong interview, March 29, 1990.

LESSONS

Before speaking to the management of the Conference a few general observations, some quite obvious, are in order.

- An multilateral conference on the environment of this nature and scope is not about environment; it is really about politics.
- It was never supposed that the results of the Conference would be legally binding on nations. Of course this made voting and achieving consensus easier. Nonetheless, nations took their positions seriously and voted accordingly. In a number of instances certain precepts multilaterally negotiated at the Conference (for example, Principle 21 of the Declaration) have been broadly adopted as customary international law.
- "Poverty was as much an element in the environmental equation as pollution or the exhaustion of resources, and a great deal more intractable than either."²⁶ (Peter Scott)
- Agenda control was important. "Population" was recognized as one of the key causes of environmental degradation, but it was too big a subject to be managed at Stockholm. Among other things, a multilateral world population conference was scheduled for 1974.
- When a fundamental controversy on substance occurs and an acrimonious debate or a bitter political confrontation is imminent, such as development versus the environment, it is useful to acknowledge the situation early and provide additional forums, apart from the actual negotiation, so that different opinions can be aired in an atmosphere that will not threaten the eventual outcome of the multilateral negotiations.
- Though conflict between negotiating parties may threaten the process, from a mediator's perspective there may be subtle benefits. Conflicts may receive better press coverage, increasing public awareness, and, as in the case of Stockholm, put additional pressure on negotiators to reach a compromise.

²⁶/Citation

--- That diplomacy in the conventional sense is a key ingredient in multilateral negotiations is well understood. But the process of reconciling almost diametrically opposed views requires a perceptive understanding of the essential elements of the dispute, the real interest of both parties, and those aspects of the dispute that may be negotiable. Essential to this process is an intuitive sense of where the two parties are coming from, infinite patience and perseverance, and an appearance of total neutrality. The technique is analogous to "shuttle diplomacy", that is, listening to and understanding both sides, looking for openings the disputants had not seen, and moving parties closer and closer to the realization that their views are not, after all, entirely irreconcilable. Basically, this was the way Strong was able to save the conference from coming apart over the issue of environment versus development. The parties themselves came to believe that environment and development can co-exist and are mutually reinforcing.

Having carefully reviewed the background and origins of the first "single issue conference" ever sponsored by the United Nations and having looked at the participants, the key issues, the negotiations, and the process by which it was managed, we have concluded that Maurice Strong played a role sufficiently pivotal as to have a profound influence on the outcome of the Conference.

The lessons one draws from this case study pertain to the management of a negotiation, the planning of it, the techniques used to settle disputes, to produce results, and to involve the participants. Strong is a highly competent and politically savvy man, and during the preparations for Stockholm, and or at the Conference itself, he took advantage of the experience of many others and used their abilities to complement his own. He built a small and unusually effective staff, and, in some instances, assigned "operating responsibilities" to certain individuals.

The following points outline some of the precepts and strategies that were employed, focusing in particular on the role of the Secretary General.

1. The Secretary General can either perform a *functional* role, i.e., take care of documentation, procedure, etc., or he can assume a *leadership* role in which he actively orchestrates the procedure and initiates action wherever required. It is most important for the Secretary General to keep in mind that national representatives are the ones to make the final decisions and therefore they are always right, and that they must feel basic ideas and initiatives are their own. Strong was a master at working this stratagem.

2. Because "the Human Environment" was such a broad, all encompassing subject, it was clear that the objective of the Conference had to be carefully defined at the outset; later the question evolved, "how does one plan to achieve that objective?" Strong did not rely on only his abilities, rather he established at the outset a small, highly capable, group at MIT who discussed purpose and strategy. This was a valuable exercise as it gave a sense of direction from the very beginning.
3. It was decided that since the Conference was to be only two weeks long, all major matters had to be negotiated and decided in advance of the Conference itself. In the case of Stockholm, three years of preparation were required, with four 27-member Preparatory Committee meetings at which much of the basic negotiation took place. At the Conference the role of the delegates was largely one of rubber-stamping that which had previously been negotiated.
4. Strong lived by the basic concept that "process is the policy," by which he meant that the substantive work of the Conference had to go hand-in-hand with the political considerations and the two moved forward conjointly. One could not have a situation in which profound decisions were made on substantive issues, only to find later that from a political point of view, the decisions were unacceptable. The two had to work together and not conflict. As Strong himself has commented:

"Therefore the people who are the practitioners of the process do have some influence on the policy, because the policy is what emerges from the process. Now that doesn't mean we have an influence that we're not supposed to have. It's inherent in the process. Somebody has to manage the process by which government power is invoked effectively."²⁷

5. Strong also believed ardently in the so-called "parallel process," that is, other activities not formally connected with Stockholm would be undertaken concurrently, but outside the Conference's orbit. Frequently, the use of the parallel process was essential in order to get things done. For example, the use of the NGOs to put pressure on delegations, or the separate negotiations conducted by

²⁷Henry Pelham Burn, "What is Maurice Strong Up to Now?", *Canadian Banker*, (March-April 1972) Vol. 79, pp 4-7

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International Working Groups in maritime pollution or atmospheric modeling, or a mini-environmental conference put on by the International Chamber of Commerce, provided special contributions that might otherwise never have been achieved.

Part of the mechanics for achieving a successful "process" involved:

- getting the preparatory committees to do much of the actual negotiating: a two-week conference would be otherwise impossible.
 - requesting the submission of "national reports" from each country, thus familiarizing government officials with the subject matter well in advance, as well as, educating the Secretariat about each country's individual needs.
 - organizing working groups made up of government representatives and outside experts to deal with certain subject areas and maximize objectivity.
 - identifying the need for and then creating "task forces" as required for particularly difficult problems.
 - encouraging regional conferences to deal with area specific issues.
 - soliciting help from expert international NGOs such as International Council of Scientific Unions (ICSU), Scientific Committee on Problems of the Environment (SCOPE), and Study of Man's Impact on the Climate (SMIC) to provide alternative ways of looking at certain issues.
6. Strong insisted on getting the budget settled and funding secure at the very outset. This alerted him to the need to find outside funding for special projects.
7. Control of information is vital. Documentation for the normal U.N. conference is enormous. Strong cut it down from well over 20,000 pages to under 1000 through the special efforts of an assistant who recruited a dozen or so readers to condense and synthesize the relevant information. Strong made sure delegations had position papers three months before the Stockholm Conference took place.

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8. Strong recognized the necessity of developing concrete action results before the end of the Conference to show the world that the Conference produced much more than the usual exchange of views.
9. Strong anticipated possible trouble spots before they occurred and tried to diffuse them. In this area, he was particularly successful. Neutralizing interagency rivalries, staying on top of the Chinese situation, and minimizing the damage caused by the Eastern Bloc's nonparticipation exemplify this well.
10. The agenda cannot be overloaded. It is imperative to acknowledge practical constraints, in time, or in substance. The Stockholm Conference had to deal with 109 separate recommendations-- some were very intricate -- in six separate subject areas; each had to be discussed, debated and voted on both in committee and then in the plenary session. For many this procedure was exasperating, and in some cases counterproductive. A lean agenda is imperative.
11. Where deep and fundamental contradictions emerge which may threaten a conference, a weekend retreat for face-to-face dialogue such as took place at Founex may be essential. If negotiators are allowed to vent frustrations in a non-threatening environment before the actual negotiation, such frustrations will not be as evident when the negotiations begin.
12. It is necessary in a multilateral negotiation to plan carefully for the secondary participants. In Strong's case this entailed primarily organizing the efforts of the NGOs, who can be an invaluable source of support and effective instigators of collateral activities. The NGOs had an agenda, daily briefings, and an "Environmental Forum" to encompass the panoply of activities they were pursuing.
13. In conclusion, if the Secretary General decides to take a leadership role, he will be most effective if he quells potential disagreement, consults often with each and every delegate, and devotes personal time to handle a troublesome development at the drop of the hat. Maurice Strong did all of this, and most important, he never lost the trust of the national delegations.

ADDENDUM

"Siting the United Nations Environment Programme"

John W. McDonald†

"There was one issue that was not decided at the conference, and I would like to share that one with you. It is one of those things that isn't written down anywhere and you might be interested. When a document like the World [Stockholm] Plan of Action is completed, it has to go to the General Assembly of the United Nations that very year for final consideration, so governments that were not present and governments that were, have the opportunity for a look at the whole document. There was one issue that was not resolved at Stockholm, and was passed on to the General Assembly for action. Where should the UNEP Secretariat be located? A very interesting thing happened the last day of the Conference: 13 governments came forth and indicated that they would like the Secretariat located in their country.

There were six countries from the developed world and seven from the developing world in the running. Our position was very clear - we wanted the Secretariat in New York. Our fall-back, or compromise position, was to support Geneva. I thought we could rally the west to support Geneva and thought Third World countries would knock each other off as they had done in the past and would not be a threat. We wanted UNEP next to the agencies it would be working with and we wanted it in Europe for our convenience. Well, it didn't work that way.

The reason it didn't work was that the Third World decided that they wanted a secretariat located in the Third World. They said, repeatedly, that in all the years of the United Nations there had never been a United Nations agency located in the Third World. It was time to change that.

Part of what I thought would happen did happen, and the rest didn't. I was responsible on the U.S. side for getting the whole Stockholm package through the General Assembly. I succeeded with regard to the plan of action, but got stuck on the question of location. I basically made two misjudgments of a political nature. First of all I misjudged the Austrians. They had almost finished a big, new building in Vienna. The Austrians felt so strongly about bringing UNEP to Austria that they sent their Foreign Minister to the General

† John W. McDonald, *Global Environmental Negotiations: The 1972 Stockholm conference and Lessons for the Future*, American Academy of Diplomacy Occasional Paper OP-2, January, 1990, p. 9.

Assembly that fall and he spent six weeks on that one item, trying to get the rest of the world to agree on Vienna.

My other error was that I misjudged the Kenyan's determination. They had a very political ambassador, a former tribal Chieftain, who used to walk down the hall, always in his flowing robes, always flanked by outriders, a very impressive figure, backed by a very impressive president, President Kenyatta, who wanted the secretariat located in Nairobi. The seven nations were finally reduced to two, Kenya and India. India was headed by Mrs. Gandhi at that point, who was a very tough leader too. It was very interesting to see who was going to win: would it be President Kenyatta or Mrs. Gandhi? One can play hardball at the United Nations on occasion. The Kenyans let the Indians know, through their ambassador in New York, that unless Mrs. Gandhi withdrew the Indian offer, Mr. Kenyatta was going to expel all Indians from Kenya! Since Idi Amin had just done that a few years before, it was taken seriously. Mrs. Gandhi did withdraw. The issue went to a vote and we lost, because the West was split and didn't have the votes anyway, and Kenya won in a landslide. That is why UNEP is located in Kenya.

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and

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**Global Environmental Negotiations:
The 1972 Stockholm Conference and Lessons for the Future**

by

John W. McDonald

Iowa Peace Institute

The State Department is really turning its back on multilateral diplomacy. Everyday the world seems to become more interdependent, yet the State Department seems less and less interested in training for that particular skill. I am very sorry to see this happen. The United States Government sends about a thousand delegations a year to international, intergovernmental, multilateral conferences, or about 6000 delegates each year. Interestingly enough about 25% of those delegates, each year, go to their first conference, and, unfortunately do not receive any advance training in multilateral diplomacy. I wrote a handbook, entitled: "How to be a Delegate", which you can buy for \$2.00 at the Government Printing Office, in an effort to provide some guidance to newcomers to the field.

I thought this evening I would talk about four things. First of all, I will talk a bit about my own personal philosophy with regard to the environment. Then I will talk about UNEP (United Nations Environment Program) and how it was created. Thirdly, I will discuss some of UNEP's accomplishments and lastly take a brief look into the future.

The discussions that I have held over the years have convinced me that global environmental issues, and all environmental issues are global, can only be resolved through multilateral diplomacy. The problems of acid rain, the greenhouse effect and ozone depletion, are just a few examples of the kind of problem I am talking about. These issues can only be resolved in a global context. Unfortunately not enough people around the world seem to recognize this. National boundaries and national sovereignty, have to fade a bit into the background if we are going to attack these global issues successfully.

This paper is based on a presentation to the seminar on multilateral negotiation on December 13, 1989. The seminar was sponsored by the American Academy of Diplomacy and the Paul H. Nitze School of Advanced International Studies, Johns Hopkins University.

My first exposure to the concept of global interdependence in the environmental field took place a number of years ago. You may remember, the United States decided, rather quickly, to stop the production of DDT, used to kill mosquitoes, because it was determined to be a potentially dangerous chemical to humans. Practically overnight we stopped production of DDT, even though nobody had died from that particular chemical. A few months after this happened, I was in India and was talking with friends, when I began to realize they were no longer as friendly as they had been in the past. They accused me of arrogance, murder, imperialism and a few other things. I asked what in the world was going on? They brought up the subject of DDT and said that the United States, which produced 95% of the world's DDT, had stopped production without prior notification, on the threat that it might kill an American. They estimated that 1 million people in India would die that year of malaria!

This was a brutal lesson for me. It all depends on one's perception of the problem. That is what environmental disputes are all about.

Environmental issues are always complex, and their resolution is even more complex. I believe three things have to happen to bring about change.

1. First of all you have to have a scientific base to identify and define the nature of the problem.
2. Then you have to involve citizens to develop the political will to bring about change on the part of governments.
3. Lastly, you need diplomats, conflict managers, negotiators, mediators - whatever you want to call them - to resolve these problems at the international, global, intergovernmental conference table. You have to involve all nations of the world in international agreements and strive to settle these problems through consensus.

Let me now move to my second point: how did we get involved in the first world conference of governments on the environment, the 1972 Stockholm conference? I've had the impression over the last year or two, listening to newcomers to the field, that environmental issues really only came to the fore a few years ago. I disagree. I believe the environmental movement started in the late 1960's. The man who brought the issue to the United Nations was a member of the Swedish Delegation, named Ambassador Astrom. He decided, with his government's backing and support, that the world should approach the problems of the environment on a global scale. In 1968, at the Economic and Social Council, in Geneva, Switzerland, Ambassador Astrom proposed the first world conference

on the environment. His model was totally different from anything that had gone before. When the United Nations General Assembly meets three months out of the year in New York, it has an agenda of some 250 separate items for consideration. They cover the whole field of man's interest. Ambassador Astrom's proposal was to hold a two week, world conference to talk about a single agenda item, the environment. He believed this model would attract the world's political leadership. If they attended such a conference they might focus on this topic for a short period of time, make some decisions and then carry those decisions out on their return home. ECOSOC and the General Assembly agreed unanimously to this model and decided to hold the conference in 1972. This model has become so popular that there have been 18 different single agenda item, two week long, world conferences held by the UN, on a wide variety of economic and social issues, since 1972.

When the idea was first presented by the Swedes in 1968, they did not offer to host the conference and did not offer to provide the funds required for such a world conference. The United States began to get very interested in this whole concept, and we began to organize ourselves two and a half years before the conference was to take place. In fact, we were so interested that we wanted to host that meeting ourselves. I estimated that such a hostship would cost us about 3 million dollars. Chris Herter and I, U.S. co-chairs for the conference preparation, talked about this. I finally went to Senator Muskie, who was very interested in the whole environmental issue, and asked him if he would put forward a bill which would allocate \$3 million to the State Department so we could tell the United Nations the United States would like to host the conference. The very day Senator Muskie agreed to do this, the Swedish Government sent a formal letter to the Secretary General of the United Nations, saying they would like to host the conference. That is how the conference took place in Stockholm.

The United Nations began immediately to structure itself for this conference. They set up a small inter-agency secretariat in New York, headed by Maurice Strong, who was then head of Canadian CIDA (their AID agency), and established a 27 nation, inter-governmental Preparatory Committee, which met four times over the two years prior to the world conference.

The State Department also began to get organized in 1970. I will not forget the first inter-agency meeting that took place at the State Department, in preparations for this conference. We invited 45 different government agencies to attend and some 60 people gathered around the table. We explained why we were there, what our plans were, and

how we wanted to involve them. I then went around the table and asked each agency to define the one word "environment." You would think it was a very simple thing to do. We got forty five different definitions - and nobody was going to change their definition. We went on to the next agenda item.

The inter-agency committee mechanism was extremely important for the actual preparation for the conference. These agency representatives were the ones who had the substantive expertise. They were the group who identified and catalogued the areas of greatest interest to the United States government. They came forward, in the months that followed that meeting, with a whole series of ideas and new initiatives, together with cost estimates. They helped to establish the list of proposals that we wanted to put forward at Stockholm. We established a small secretariat at the State Department and developed a "scope" paper which outlined our goals and objectives for the conference. This was the one single document that was approved by all 45 agencies. We developed a number of additional position papers that focused on the individual agenda items and on political issues that might arise at the conference.

We agreed, in this inter-agency process, on a number of different United States initiatives. We agreed to support:

1. Treaties and agreements dealing with marine pollution, the release of toxic substances into the environment, and the preservation of plant and animal genetic stock.
2. Efforts to monitor the atmosphere, the ocean, the terrestrial environment, and even human health itself.
3. Coordinated national research programs on the environment.
4. The strengthening of training, education and public information on the environment, and improved UN coordination of environmental programs.

With regard to this last point, we realized that the United Nations was not structured to deal with environmental issues or with any of the multiple recommendations that we hoped would come out of the Stockholm conference. We decided it was up to the United States, since we were taking a major leadership role in the preparation for the conference, to develop a workable model which would restructure the United Nations and enable it to cope with the problems of the global environment. This turned out to be my task. A great deal of time and effort was spent on this issue. We knew that money would be important. Initially we talked about a \$2 million fund for the environment. I realized we weren't going

to get very far with that kind of money, so I came in to a task force meeting one day and proposed a \$100 million United States contribution to the fund. The task force finally agreed and we made a presentation to the White House using that figure.

The difficulty was there was also an Office of Management and Budget, who had different ideas about our recommendation. They agreed to a \$100 million total fund, but said they wanted us to put up only \$40 million. That was our position for Stockholm. Even at that reduced figure this was a major United States initiative.

Getting the State Department model accepted by the scientific community, other United States government agencies and by various non-governmental organizations, was a very tricky thing. We finally achieved agreement, and made a formal proposal to the fourth and last UN preparatory committee meeting. We were the first government to present such a proposal and showed the world that this subject was a top-notch priority for the United States. Our model called for:

1. The creation of a new UN agency (UNEP), with a permanent secretariat staff to carry out the recommendations coming out of Stockholm.
2. The creation of a new, voluntary fund, designed to finance the projects that would be developed.
3. The creation of a new inter-governmental mechanism, a governing body of 27 nations, who would supervise the secretariat and insure that governments were supportive of the organization.
4. The creation of a new concept, an "Environmental Coordinating Board" to bring together all of the Specialized Agencies of the United Nations to insure there would be no overlap or duplication among these organizations and UNEP.

I have always felt that Stockholm was a success before it took place. Ninety different governments around the world - developed and developing - created new entities, new bureaucracies, new cross-ministerial mechanisms, to cope with the environmental problems they knew were to be discussed at Stockholm. This is a remarkable example of how the mere calling of this world conference stimulated positive action in so many countries around the world.

There were, of course, some developing countries that did not understand the dangers of pollution and said "Give us your smokestacks, they represent development and that is what we want." Maurice Strong, the Secretary General, did a terrific job on this

particular issue. He understood what the Third World was talking about. He added the concept of development to the Stockholm agenda so that governments could consider that issue as well. He also moved the UN Secretariat to Geneva so it wouldn't be right under the thumb of the United States in New York.

What happened in the U. S. private sector? While the US government and the UN secretariat were getting organized and were working very closely together, a number of private American citizens wanted to become involved. Secretary of State Rogers asked Senator Baker, if he would head a 27 person, private citizens group, which would be an Advisory Committee to the Secretary, on the Stockholm Conference. A very eminent group of American citizens was appointed and held hearings all over the United States to find out what the people of this country were really thinking about with respect to the environment. Over 170 people testified before the Baker committee and over 300 other people presented position papers to the Committee describing what they thought should be discussed at Stockholm.

The Baker committee report commented on a number of the UN Secretariat's draft recommendations and on various US position papers as they were being developed. The Committee proved to be an important bridge between the government and the private sector.

During this two year preparatory period, we worked closely with Maurice Strong and his secretariat staff. We would often sit down informally, exchange ideas with them, and even send up position papers to try to help them develop what we called a "plan of action". The plan of action was going to be the document that the World Conference was going to focus on. We tried subtly, and sometimes not so subtly, to get our ideas into that plan, believing that if we got them there first, there would be more opportunity for a favorable discussion than if we had to do it at the conference itself.

Finally, over a period of some 6 months, we put together a very strong, 62 person, U.S. delegation, led by Russell Train, Chairman of the Council on Environmental Quality and Chris Herter from State. We also had Russ Peterson, Senator Baker, and Bill Ruckelshaus, to name a few of the eminent people on the delegation, and they did an outstanding job at Stockholm.

What about the Conference itself? You might wonder how it is possible to reach agreement on anything when you have 114 nations, 1500 delegates, 400 members of the

world press, 2000 private citizens from all parts of the world, and strong UN representation, getting together for a two week period to discuss an issue as complicated and as sensitive as the environment. It is hard to do, but it can be done.

The key to the success of any conference, whether it is the 1972 conference or the upcoming 1992 conference on the environment, is the level of advanced planning that you put into the effort; the strong and knowledgeable delegation that you put together; the ability to work within the UN system; and of course the fact that the U.S. plays a leadership role, with ideas, expertise and resources coming from the United States. If you can do those things, you will come out with a positive result.

We were all fortunate to have as a key player, on the UN side, the Secretary General of the Conference, Maurice Strong. He was - still is - a remarkable individual who maintained a high profile in the environmental field during that period and until this very day.

The job of the Conference was to review the draft document, called the Plan of Action, which was at that point 65 pages long and had over 100 recommendations for national and international action. That was to be the focus of the Conference.

The Conference generated its own exciting atmosphere. It was a stimulating place to be. I was delighted to be part of the process. When you have 4000 public and private people together, all focused on one general subject, there is just a synergy and energy there that is really remarkable. I think that was also helpful in bringing about the kind of conclusion we finally reached.

It was my job to negotiate the model creating UNEP, that we had put forward earlier. Shortly after we put our draft to the Prep-Comm, Brazil, India, and Egypt decided they wanted to put forward their models. We suddenly had four drafts to work with. We agreed that the four country representatives would arrive in Stockholm a few days early to see if we couldn't merge the four drafts into one piece of paper, with brackets around the disagreed portions, so the text would be easier to work with. We were successful. An open ended drafting committee (that means anybody can participate that wants to), was then established after the conference convened and we had 50 to 60 people who decided to make this their full time employment for their two weeks in Stockholm. We worked day and night over that two week period - these were very intense negotiations - and were finally

successful. The US model survived almost intact. The major change in the US proposal was to expand the intergovernmental body from 27 to 54 members.

In spite of the fact there were 4000 people present, in spite of the fact that there were 100 recommendations to agree upon, the Conference ended exactly on time and the Plan of Action, was adopted by consensus, without a vote. A remarkable achievement, because many of these recommendations were far-reaching and important. Although the recommendations do not have the power of law, the Plan of Action is like a resolution, they do have a major moral impact on those nations who participated. People went home from that conference determined to try to carry out the recommendations they had supported.

What were some of the other things agreed upon?

1. A global earthwatch program was to be established, to monitor the atmosphere, the oceans, the land, and human health.
2. A call for a 10 year moratorium on commercial whaling.
3. A call for the early completion and ratification of treaties on ocean dumping, on conservation issues, and on the creation of a World Heritage Trust.
4. A call for the preservation and safeguarding of plant and animal genetic resources.
5. Recommendations that environmental impact statements on development projects be required.
6. A Declaration on the Human Environment, listing 26 different principles. Two of those 26 are worthy of special note:
 - Countries were responsible for not causing damage to the environment of other States.
 - Demographic policies should be applied when the rates of population growth are likely to have adverse effects on the environment or on development. This second point was picked up at the World Population Conference in 1974 and was expanded there.

Siting the United Nations Environment Programme

There was one issue that was not decided at the conference, and I would like to share that one with you. It is one of those things that isn't written down anywhere and you might be interested. When a document like the World Plan of Action is completed, it has to go to the General Assembly of the United Nations that very year for final consideration, so governments that were not present and governments that were, have the opportunity for a look at the whole document. There was one issue that was not resolved at Stockholm, and was passed on to the General Assembly for action. Where should the UNEP Secretariat be located? A very interesting thing happened the last day of the Conference: 13 governments came forth and indicated that they would like the Secretariat to be located in their country.

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My other error was that I misjudged the Kenyan's determination. They had a very political ambassador, a former tribal Chieftain, who used to walk down the hall, always in his flowing robes, always flanked by outriders, a very impressive figure, backed by a very impressive president, President Kenyatta, who wanted the secretariat located in Nairobi. The seven nations were finally reduced to two, Kenya and India. India was headed by Mrs. Gandhi at that point, who was a very tough leader too. It was very interesting to see who was going to win: would it be President Kenyatta or Mrs. Gandhi? One can play hardball at the United Nations on occasion. The Kenyans let the Indians know, through their ambassador in New York, that unless Mrs. Gandhi withdrew the Indian offer, Mr. Kenyatta was going to expel all Indians from Kenya! Since Idi Amin had just done that a few years before, it was taken seriously. Mrs. Gandhi did withdraw. The issue went to a vote and we lost, because the West was split and didn't have the votes anyway, and Kenya won in a landslide. That is why UNEP is located in Kenya.

Did it achieve anything else? Yes it did. It caught the attention of policy makers around the world. It made environment an issue that they had to focus on. It made them realize that they had to spend more time and money on environmental issues than they had ever done before. This world conference aroused public interest around the world, not just in the developed world, not just the United States, but around the world. It raised concerns about the environment and its impact on the quality of life. It made people and politicians think. It made them begin to shift their priorities. The environment began to become a political issue: The Green parties in Europe came out of Stockholm.

My Third Point. What has UNEP done over the years since 1972? They have done a great deal but I am only going to talk about two specific projects, because I think they will make my point.

The first is known as the Regional Seas Program. In the early 1970s, the beautiful Mediterranean Sea was dying. It was dying from discharges into the sea from the 18 different nations surrounding the Mediterranean. Nations that often were in conflict with each other, like Greece and Turkey, Israel and its Arab neighbors, Egypt and Libya, Algeria - Morocco, Albania - Yugoslavia -- just picture the geography of that beautiful sea. UNEP decided in 1973, shortly after its creation, that it would try to facilitate the cleaning up of the Mediterranean Sea. Secretary General Maurice Strong had been named the first head of UNEP and Peter Thatcher headed the Geneva office of UNEP. These two decided that in spite of the fact that they were headquartered in Nairobi, they were going to try to impact on this very difficult problem. I think this was a very courageous decision on their part, and one that actually was very successful.

Secretariats from the various specialized agencies, like FAO, UNESCO, WHO, WMO, and IAEA, worked with UNEP on this concept. Non-governmental organizations like ICM, CIM, ICSEA and the Quakers, worked together with governments on this whole problem. The Quakers had two conferences in Switzerland in 1974 and 1975 that were extremely important in bringing people together to talk about pollution in the Mediterranean - another example of the power of the non-governmental organization community.

UNEP worked for several years behind the scenes, talking about the issues, talking with governments, telling them that the sea was dying and trying to get them to sit down and talk to each other. A very difficult thing to do when you have such a wide variety of nations disagreeing on very basic political issues. Finally, in 1975, the first Barcelona

Conference took place under UNEP sponsorship. All of the concerned governments came to that conference and started talking. They negotiated off and on for almost two years, until finally in 1976 the Barcelona Convention to reduce pollution in the Mediterranean was signed by 17 of the 18 coastal states. Only Albania refused to sign. This treaty was a major breakthrough for UNEP and really put it on the environmental map.

The treaty called for the states around the Mediterranean to spend billions of dollars to clean up their own pollution, inside their own national boundaries, so that these poisons would not move into the Mediterranean. Today the sea is alive and well. UNEP deserves an enormous amount of credit for their role. They are applying this same model in the Persian Gulf, in the Caribbean, and the Gulf of Guinea.

UNEP's second accomplishment is equally impressive. I am talking about the International Convention for the Protection of the Ozone Layer, which was signed in Vienna in 1985.

You may remember, back in 1974, the scientific community began talking about the dangers of CFC's. In 1978 the US banned aerosols. In 1980 EPA did a big study on the impact of those emissions, but it was not conclusive. In 1983 the National Academy made a study, but again the results were not conclusive. Many people began to worry about CFC emissions, however. Governments were sufficiently worried to come to the conference table in 1985 and they actually negotiated and signed an international treaty. There were no teeth in the treaty, but what the treaty did was to provide a process. That process was started with UNEP's convening a second conference in September, 1987, in Montreal, under the Vienna treaty. The Montreal protocol put teeth into the treaty. It called for a 50% reduction in CFC emissions by 1998.

Two things had happened between 1985 and 1987. First, US industry, previously in strong opposition to this whole concept of controlling emissions, reversed itself. One can argue as to why they changed their position. One reason was that they found substitutes for CFC's. I also think they gave up some power in this whole process, and I think that is an important thing to remember.

The second thing that happened was that a new, informal negotiation process was tried. Normally, scientists and diplomats don't talk to each other - this is not just in the United States, but around the world. One of the reasons, of course, is that they don't speak the same language, but also, like practitioners and academics in the field of conflict

resolution, they don't communicate very well with each other. This new process, in which US Ambassador Richard Benedick played a key role, took place in Virginia, at the IBM Center. UNEP invited scientists and diplomats from all over the world to come together for a week at IBM in an informal atmosphere, with no agenda and no conclusions. It allowed scientists and diplomats to get to know each other's point of view, and allowed the building of a trust relationship. A second one week session was held. I think this process provided a critical breakthrough and is one of the main reasons that the 1987 protocol was actually signed. For the first time these two different communities began to communicate with each other. It wasn't until 1988, a year after the Montreal protocol, that the scientific community proved, to everyone's satisfaction, the impact of CFC's on the ozone hole. In March of 1989, the European Economic Community decided they would require a 100% reduction of CFC's by the year 2000 in their 12 member states. The Nordic countries decided to reduce CFC emissions by 100% by 1995. In April of 1990 there will be another session under the Montreal Protocol and my guess is they will amend their text and ban CFCs totally by the year 2000!

These are two dramatic examples of what UNEP has been able to do in today's world.

My last point - What Does the Future Hold? I made a speech in Denver two months ago on environmental issues, and said we had come a long way since 1972, but that we had a very long way to go. I said, in my opinion, we had only 20 years, to the year 2010, to turn the world around, environmentally speaking, in order to save this earth. Last month I heard my friend Lester Brown talk about the state of the world in 1990, and learned of his belief that we have only 10 years left to take the kind of political decisions that need to be made if we are going to save this earth. I confess that I am now with Lester Brown.

I know this is an enormous order, because the time is so short. The key is developing a global political will to change people's perceptions. We have to change the way people think about the world and about the environment that they live in. I do believe we have moved beyond the fear of nuclear annihilation that we have been threatened with for four decades. Today the major global problem is the environment. However, we have something today that we didn't have 20 years ago. We have the organizational instruments in place that can bring about the changes needed around the world. Not only do we have the UN Environment Program and the United Nations and the various Specialized Agencies, but we have informed, non-governmental organizations by the hundreds, all over the world, and we have informed and knowledgeable governments. In most areas the

scientific base is there, and the ability to pressure governments to adapt is there as well, but this has to be organized and structured. I believe that it is time for citizens to be alerted, to pressure governments into taking actions that are known and can be taken.

We have a great opportunity today to move these issues along more rapidly than we might expect, and to work on a global scale. I am talking about the U.N. General Assembly agreement to hold a Conference on the Environment in 1992, 20 years after Stockholm.

To me, Stockholm II is a conference where the United States must take a world leadership role, as we did at Stockholm. The substance of the issues to be discussed I leave to you, because you are the experts. I would suggest, however, that one of the things the experts do is to read the Stockholm Plan of Action and determine what we have implemented and what we have not achieved. Stockholm produced a very thoughtful document but there is a great deal in it that we have not done. I would like to see the Plan of Action as a major agenda item of the 1992 conference, for a discussion of what still needs to be done.

I would like to focus my closing remarks on the conference process, because I have some experience in this area. How should the United States prepare for the 1992 World Conference on the Environment, starting right now. I have eight suggestions I would like to present for your action:

1. The first thing that should happen is that a 15 person, full-time U.S. Secretariat should be established now, at the State Department, with personnel seconded from the various environmental agencies around town; they can bring substantial knowledge, ideas and insights into the plans, proposals, and recommendations that have to be developed for the 1992 conference.
2. State should establish a federal inter-agency committee, made up of all the concerned agencies in the Executive Branch, and have Hill staffers on the committee. It is critical that the Congress be a part of this whole process since they will be a part of the U.S. delegation to the 1992 conference. One has to have the ear of the Hill at the beginning stages of the Executive Branch preparations.
3. A public committee, like the Baker Committee, should be appointed by the President to hold public hearings around the United States, to let citizens speak out about their concerns and to report back on their recommendations.
4. A non-governmental organizations committee should be established and become a close working part of the government's preparations for the 1992 conference. This NGO committee should be briefed monthly by the government, and draft position papers should be exchanged and

should be worked on jointly. I first met Margaret Mead in Stockholm as a very angry woman. She was totally frustrated by the Stockholm experience, because she didn't know how our government worked. She came to Stockholm to change the government's position on a number of issues. I had to explain to her, repeatedly, and without much success, that she could have impacted on the process six to 12 months earlier when it was being put together, but that now it was too late. That is the role of the NGO committee. Interaction should be established with experts outside the government, and at an early stage, so that their ideas can become part of the position papers, and so that the outcome of the conference will have a strong support base.

5. State should develop a "scope" paper six months before the conference which is cleared by all government agencies. This paper should outline the U.S. strategy, goals, and objectives in an unclassified fashion, so the paper can be made available to the NGO community and to the press.
6. State should take 9 months to develop a 40 person U.S. delegation - it takes that long to get a good, solid delegation put together and approved by the White House, with political clout, including Senators and Representatives from both parties and senior members of the Cabinet and White House, and experts from the scientific community and the government who have experience in the international arena.
7. Three months before the conference the delegation should be brought together in Washington, DC for one week - for briefing and training in the art of negotiation. At the end of that week everybody will know what their tasks are and you will have a team, rather than 40 people operating independently.
8. Lastly, it is important to get Presidential support for this conference. There should also be a Presidential send-off, with a White House lunch, before the delegation flies together to the conference. The media should give wide coverage to the conference.

I have suggested eight specifics, some of which should be begun immediately. All are practical and can be done. I know, because I have done them, at one time or another, in my 40 year career at State. They have never been put together in this fashion, however, in one conference. I believe that by putting them together in this fashion we will have a powerful instrument for the kind of change that I think is essential and that we are going to have to make to cope with the environmental problems the world is facing today. -

Let me close by saying that I am an optimist, but I believe that we can and we must save this earth that we are living on. I believe that by focusing on the 1992 conference, in a very serious fashion, we can make an enormous contribution toward that goal.

WHAT SHOULD BE SAID AT UNCED?

INSTITUTIONAL CHOICES FOR THE RIO CONFERENCE

BY

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THE ECONOMY

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Executive Summary

The United Nations Conference on Environment and Development (or Earth Summit as it is coming to be called) may provide the best chance for the next ten years to resolve some of the most difficult issues identified by the Brundtland Report. Runaway population growth in the developing world and dramatic increases in the consumption of energy and natural resources in countries such as Canada are putting some of the planet's critical ecosystems at risk.

Yet the Preparatory Committee for the Conference has been stymied by North/South political disputes. This stalemate is characterized by the existence of two very separate agendas. The developed country agenda, supported by Canada, concentrates on dealing with global warming, tropical deforestation, the massive losses of biological diversity in the tropics and the threats to the world's oceans. The Third World, suspicious that actions to combat global warming and deforestation will make their development process more difficult, wants attention given to their issues of debt reduction, poverty alleviation, an increased flow of financial resources and the transfer of environmentally sound technology from North to South.

Because none of the "Northern" issues can be resolved without the co-operation of the "South", the developing countries are finally in a negotiation where they have a decent card to play. And the refusal of the developed countries to discuss serious resource transfers and of the United States to discuss serious targets for the reduction of Greenhouse Gases has been met with a refusal by the developing countries to make progress on many of the issues important to Canada.

Canada has a real interest in seeing the UNCED process succeed. As the Brundtland Report so graphically pointed out, the earth's economy and its ecology are now so closely interlocked that the natural environment is now becoming the main constraint on economic growth and well being. The integration of the environment and the economy in international decision-making is critical if the world is to provide a decent standard of living for the 10 billion that will be on the earth by the middle of the next century. The Conference Secretary-General, Maurice Strong, recognizing that the environment has now moved to the centre of the economic stage, raised the ante by persuading the General Assembly to make the Rio Conference into the largest summit meeting yet held.

And support for multilateral solutions to international problems is a Canadian tradition which polls show continuing into the 1990's. In addition, despite one or two recent results, all of the polls show that Canadians still feel that the environment is an issue of paramount importance. In fact, when questioned in an Angus Reid poll commissioned by CIDA, the majority of Canadians volunteered that the international issue which most concerned them was the threat of environmental degradation. Earlier polls taken by Environics showed an extraordinary 85% of the public believing that environmental problems poses a major threat to the survival of mankind. Expectations that the environment would disappear as a major issue after a recession had set in have also been proven to be unfounded by the latest Environics poll. Asked in May of this year what the major ingredients of an economic development plan for Canada should be, the largest number of respondents felt that environmental protection should be the critical ingredient.

Canada's competitive position could be affected by a number of the international agreements being discussed. Canada's domestic economy is more affected by the use of natural resources than that of virtually any other developed country. As a result, agreements on global warming and forestry could have substantial effects on Canadian industry. If Germany and Japan, for example, who are already considerably more efficient users of energy than Canada, unilaterally induce their industries to become even more efficient (with CO2 reduction targets, for example), than Canada could fall farther behind in the competitiveness race unless it reacts quickly. And as the fur and seal boycotts have shown, Canadian domestic policies which are seen to be "anti-environmental" by European and other environmental groups can easily lead to damaging boycotts of Canadian exports. Threats to boycott Canadian forestry exports are real. Finally, the relationship

between trade and the environment is likely to become even more prominent as talk of the next GATT Round becoming the "green round" enters the UNCED discussions.

This paper therefore recommends that the promotion of sustainable development become one of the principle cornerstones of Canadian foreign policy for the rest of this century.

Because of the long lead times involved with international meetings, the time to move to break the deadlock is now. Because the Conference is to be a summit, the movement must come from the Prime Minister and his Office. And Canada is in a unique position to develop and try out some new ideas in the months ahead. Strengthening the United Nations and the multilateral system has long been a Canadian interest. The end of the Cold War may provide a unique opportunity to make giant strides in this area. And UNCED may provide the first chance to test out many of the ideas for reform. The Earth Summit will be the first major international conference since the end of the Cold War. It will also be the largest summit meeting ever held. The Brazilian hosts estimate that at least 70 Heads of Government and heads of State will be attending. It would be naive to assume that any major progress will be made in restructuring by that time, but it could provide a high profile opportunity for the Prime Minister to announce Canadian leadership in this area.

This paper recommends that Canada should take an active role in promoting the reform of the international system in the wake of the Cold War. Recognizing that none of these reforms are likely to be in place by the time of UNCED and that sustainable development requires action now, the Round Table should recommend a strategy which enables progress to be made at Rio which either promotes or at least does not hinder the chances for overall reform of the United Nations system. With these caveats in mind, it is possible to set out a series of Canadian institutional objectives for UNCED. Many of these would also apply to the long term reform process as well:

- i) The establishment of a high level political forum for the integration of environment and economy and for the discussion of issues related to environment and security
- ii) The development and implementation of a coordinated Canadian position on sustainable development throughout the multilateral system. The creation of mechanisms for the integration of environmental considerations within the programs of the international agencies.
- iii) Strengthening the professional competence of the U.N. Secretariats
- iv) Strengthening existing institutions, such as the United Nations Environment Program, the United Nations Development Programme and the World Bank
- v) Strengthening local, national and regional institutions, both governmental, and outside government, to plan and implement policies, programmes and activities that are environmentally sustainable.
- vi) The development of mechanisms for the implementation of the global conventions.
- vii) Strengthening the scientific and information capacity of the multilateral system

The paper recommends that any Canadian positions on the institutions to flow from UNCED be designed to involve the ngo community, the private sector and the scientific community more directly in the international system. The UNCED Secretariat has already begun this process by involving all three groups in the development of Agenda 21, the substantive backbone of the Conference. And the Canadian delegations to the Preparatory Committee Meetings have involved these groups to an unprecedented degree, reflecting the basic concerns of Canadians with environmental problems.

i) A High Level Political Forum-

Canada should follow up the Prime Minister's commitment to support Japanese membership of the Security Council with a major initiative on reform of the Council. This would include expanding the number of permanent members, changing its mandate and its place within the U.N. system

Given that reform of the Security Council is likely to be a long term process and that UNCED must make provision for high level discussions of these issues immediately, the paper recommends that Canada should propose a meeting of a "non-organization" consisting of the G-7, the Soviet Union and a representative number of developing countries. It would meet at the Heads of Government level, perhaps one year after the Earth Summit. It would review the integration of environment and economics; environment and security and any progress on Agenda 21 or other items.

The group could meet annually or biennially as desired. If and when the reform of the United Nations is implemented, this "non-organization" can easily go out of business. If international reform efforts founder once again, this group might become more formal. To bring more focus to its deliberations, it would establish a distinguished independent panel of representatives from the ngo community, the private sector and the scientific community chosen in their private capacities. This group would be responsible for the regular publication of a State of the Globe report. Ample precedents exist for such a publication in the official realm- the World Bank's World Development Report and UNDP's Human Development Report; and in the unofficial sphere- Worldwatch Institute's State of the World Report and WRI's World Resources Report.

ii) Environment/Development Integration

The present international system is ill equipped to deal with the integration of environment and economics in decision-making that sustainable development demands. The paper recommends three steps for Canada to ensure better integration:

1) The Round Table should advise the Prime Minister to establish a mechanism, perhaps within the PCO, to ensure that all Canadian positions in the U.N., the Bretton Woods Institutions and the specialized agencies are consistent with the principles of sustainable development.

2) Canada should work with a number of other sympathetic countries to insist in the Governing Councils of the various bodies that the agency heads personally attend meetings called by the new Secretary-General or DGIESC. The introduction in all Governing Councils of a similar resolution containing a threat of budgetary or other sanctions could go a long way to making the existing coordinating machinery work properly.

3) Canada could propose that the World Bank Development Committee (a group composed of Finance Ministers) form the nucleus of a Sustainable Development Commission. It would have to be serviced by a small group, based in the central U.N Secretariat and drawing on some of the resources of the Bretton Woods institutions. The present UNCED Secretariat would serve as the nucleus of this group.

iii) Improving the Competence of U.N. Secretariats

As a number of studies have pointed out, the Secretary-General of the United Nations has a number of bureaucratic powers to improve the efficiency of the system which none of the recent Secretaries General have used. Canada should work with other interested countries to ensure that the next Secretary-General is chosen for his or her capacity for leadership and administrative

competence rather than for simple geographic and geopolitical reasons. Canada could also use its influence, along with that of other interested countries such as the Nordics and the Dutch, to make certain that the number two in the U.N., the Director-General for International Economic and Social Co-operation is also chosen on the basis of proven ability.

iv) Reform of Existing Institutions

UNEP should be strengthened both in budget and in staff to enable it to carry out its functions more effectively. Monitoring and assessment, the development of new legal instruments, and new initiatives in the marine and coastal area are of considerable importance. It is also important that UNEP retain its mandate as the environmental "conscience" of the United Nations system when the the mandate for sustainable development becomes entrenched in the central secretariat of the U.N.

The UNCED Secretariat has proposed that UNDP become the lynchpin of an ambitious and necessary scheme to greatly increase the capacity of developing countries to plan and implement sustainable development. Under this plan, each region of the developing world would produce a plan to support a network of national institutions for policy studies, technology transfer and scientific research in support of sustainable development. Canada should support this initiative if it specifically provides for the strengthening of national and regional ngo networks. It reinforces UNDP's role as the main provider of technical assistance- a role that has been eroded in recent years by the multilateral banks setting up many of their own systems. It increases the effectiveness of Canada's considerable investment in UNDP. It increases the capacity of the developing countries to participate in UNCED and other processes as equal partners.

Canada should investigate with the Bank (and to a lesser extent, with UNDP) the use of the existing country programming process to help developing countries to design and implement sustainable development strategies. Canada should support the UNCED Secretariat recommendation that "contracts" be made between donors or groups of donors and countries. These contracts would contain specific commitments by donor governments to provide long term sources of finance in exchange for specific commitments by recipients to such things as reductions in rates of population growth, preservation of biological diversity and tropical forests and more sustainable energy strategies.

v) Treaty Secretariats

It seems likely that each of the new conventions will require a separate secretariat to administer the agreement. The Round Table should recommend that Canada should insist on four major characteristics of each Secretariat:

- 1) That voting power be based on something other than financial contributions or straight calculations of population size.
- 2) That as far as possible, these Secretariats should rely on existing sources of expertise within the international system.
- 3) That each Secretariat have a Canadian style "stakeholder" advisory group composed of representatives of the scientific community, the ngo community and the private sector. And that the members be chosen on merit.
- 4) That the policy decision making power over the fund be separated from the fiscal management and disbursement of that fund. This would allow funds to be spent rationally through a revamped GEF or the "sourcing fund" mentioned in the finance paper.

vi) A Global Watch System

Canada should support proposals for an independent commission, drawing heavily on such non-governmental bodies as the International Council of Scientific Unions, the World Conservation Union (IUCN), on such U.N agencies as UNEP, WMO and the like, the expertise of the private sector and of national governments. Such a commission could be part of the commission suggested

All of the above recommendations are in line with Canada's traditional support of the U.N. system and both its development and peacekeeping functions. The indications from the recent polls are they would receive substantial support from the Canadian people. They might also provide some political "elbow room" desperately needed if UNCED is to succeed. They are also in line with the principle listed above that a minimum of new institutions be created and that anything which is done can be seen to facilitate a future thoroughgoing reform of the international system.

But none of these suggestions will succeed if it is seen as an exclusive Canadian initiative. At the moment the politics of the UNCED process are bad. The two agendas have not been merged. No real progress has been made on institutional questions. And U.S. resistance to discuss the financial issues has stalled progress there. This suggests an ideal role for the traditional Canadian strengths of coalition building and North/South dialogue. Because time is short and UNCED will be conducted at the highest level, the Round Table should reiterate its belief that the Prime Minister and his office should become involved very soon. The timing for Canadian exploratory discussions is opportune. A chance to correct some of the shortcomings in the U.N. Secretariat will arise with appointment of the first post cold war Secretary-General. The Prime Minister will be meeting with his colleagues from the Commonwealth in October. This would not only provide an opportunity to exchange views with Prime Minister Major who was supportive of UNCED as host of the G-7 summit, it would also provide an opportunity for liaison with Australia and New Zealand, with whom Canada has been working closely throughout the PrepCom process. It would also offer the Prime Minister a representative forum of Third World members of the Preparatory process, especially India and Malaysia who have been active from the beginning. The World Bank/IMF meetings in Bangkok, also in that month would present an opportunity to explore some of the coordination initiatives. The Francophone summit will also offer opportunities to further hone any initiatives emerging from the Harare meeting. Finally, the visit to Canada of the President of Brazil next spring would offer the opportunity to further explore some of these issues prior to the decisive final meeting of the UNCED Preparatory Committee in March and April.

Background

Environment and development first emerged as international issues at the United Nations Conference on the Human Environment held in Stockholm in 1972. The early preparations for the Conference, called at the request of Sweden and most of the other OECD countries, were characterized by a serious North/South split. Many developing countries felt that environmental problems were largely problems of affluence, which could best be cured by the revenues resulting from affluence. They feared that the new found enthusiasm for the environment in the North would slow down their development. Health and environmental restrictions in the developed world would be used to restrict their exports, environmental impact assessment provisions would clog an already seriously constricted foreign aid pipeline and concerns about resource shortages would be used to slow down their own development.

This North/South démarche led to the appointment of Maurice Strong, then President of CIDA as Secretary-General of the Conference. Capitalizing on his credibility with Third World governments, Strong set out to change the political dynamic of the Conference to take account of the developing country concerns with international economic relations, and the environmental problems of the tropics - natural resource management, the spread of the deserts and soil erosion as well as the developed world's worries about pesticides, industrial pollution and the health of the oceans.

Twenty years later, Maurice Strong is charged with planning another Conference. The United Nations Conference on Environment and Development will be held in Brazil in 1992. It is planned as a direct follow-up to the work of the World Commission on Environment and Development. And if the three Preparatory Committee meetings held so far are any indication, the North/South split is as prominent as it was in 1972.

The Canadian Agenda

The Canadian agenda for 1992, like that of most of the developed world, is largely focussed on climate change, the loss of biological diversity in the tropics, deforestation, and the health of the oceans. Although global conventions for the first two are currently being negotiated on separate tracks from the 1992 Conference, these issues will be at the center of the Brazil Conference.

Global warming emerged as an issue at the Toronto Conference on the Changing Atmosphere in 1988 where over 300 scientists, policymakers and ngo's agreed on the need for drastic action to curb the emissions of greenhouse gases (GHGs). The Conference called for a 20% cut in the emissions of the most common gas, CO₂. The Intergovernmental Panel on Climate Change (IPCC), which comprises most of the world's first rate climate scientists confirmed the findings of the Toronto Conference. Because of man induced emissions of GHGs, the world faces temperature increases over the next few decades greater than those experienced over the past 20,000 years. These changes will lead to sea level rises, flooding of coastal regions in many countries, major changes in the frequency and impact of tropical storms and potentially catastrophic changes in world agricultural patterns.

The Toronto Conference has been succeeded by a series of meetings designed to produce a framework convention on global warming by the time of the Rio Conference. The most recent session, in Nairobi in September of 1991, concluded with little agreement being reached. The debate on climate change centers around whether or not the negotiators should aim for a convention containing specific mandatory commitments on CO₂ emissions, forestry or funding. Led by Germany, the European Community is pressing for

substantial cuts in CO2 emissions by the developed countries and the establishment of a fund to help developing countries develop more sustainable energy sources. Japan has responded with the so-called "pledge and review" system whereby governments would unilaterally determine and announce their own reduction (or stabilization) targets and open their measures for achieving them to international scrutiny. Progress is currently being blocked by the United States which has refused to agree even to the principle of targets, a number of oil producing states (led by Saudi Arabia) and a number of the developing countries. Canada's policy has been to stabilize Canadian CO2 emissions at 1990 levels by the year 2000.

The second convention, on biological diversity, is currently stalled, the victim of a North/South dispute over the use of genetic material in biotechnology. Developing countries are unwilling to devote more resources to protecting their vast store of genetic material unless they can derive some benefit from the value of that material to the Northern pharmaceutical and biotechnology industries.

Canada has also been involved in efforts to begin negotiations on a new international forestry convention. This convention would go beyond the carbon protocols proposed for any climate change convention to "lock up" CO2 from the atmosphere in growing trees. It would acknowledge that forests have other uses as well and would seek to address forestry as an economic resource and as the world's greatest reservoir of biological diversity. This convention would be concerned with forestry in the temperate regions as well as in the tropics. The convention has been put on hold indefinitely because of the strong opposition of many of the tropical forestry exporting countries, led by Malaysia. It is likely that UNCED will produce only a statement of principles.

The Developing Country Agenda

If the "global issues" dominate the agendas of Canada and the other OECD countries at UNCED, then the agendas of the Third World are strikingly familiar to those which they brought to the original Conference at Stockholm in 1972. There is an overwhelming feeling among the developing countries that their first priorities should be poverty reduction and development. Not that many do not understand the significance of the global issues nor, indeed, that the developing world will be more seriously affected by environmental deterioration than the North. These concerns are simply overwhelmed by the depth of the economic crises facing most in the Third World.

Despite the success of a number of newly industrialized countries in developing their industrial and export industries, most of the developing world has been in a state of continual economic crisis throughout the eighties. In Africa, food production per capita has been steadily dropping, infant mortality rates rising, life expectancy becoming shorter, while the AIDs pandemic continues. Standards of living throughout Latin America, Africa and much of Asia have dropped dramatically, often at rates comparable to or even greater than those experienced in North America during the depression. This is placing the newly democratic governments in Latin America under tremendous pressure to demonstrate that they can deliver the economic, as well as the political goods. Most Latin American countries have experienced substantial declines in their per capita incomes - it is not uncommon for these declines to be of the order of 35% in real terms.

The final demonstration of the seriousness of the economic crisis is the sheer scale of the transfer of resources. The World Bank and the IMF now estimate that the developing world is remitting over \$50 billion more per year to the developed countries than it receives in capital transfers.

The debt crisis and the measures recommended by the international financial community to correct it have resulted in cuts in public expenditure as governments strive to make their economies more efficient and to devote more and more resources to debt repayment. Mexico, for example, despite its population growth, has reduced its education budget by more than 50% over the last decade.

In addition to the financial flows, many developing countries also point out that the world trading system also puts them in a difficult position. Many worry that environmental health and conservation restrictions in the developed world will be used to restrict their exports. The fact that the first two disputes submitted to the settlement regime of the U.S.-Canada Free Trade Agreement involved conservation restrictions has done nothing to allay these fears. The tropical timber exporters in particular, are worried about the effects of a continuing ban on the use of tropical timber in a number of European municipalities brought about by pressure from the environmental groups. They fear that this is only the beginning of such restrictions on tropical exports and fear that they could soon become a matter of national policy for those countries with strong domestic ngo lobbies.

Given the way in which they feel that the economic deck appears to be stacked against them many developing countries are suspicious of the international community turning its attention to environment and development issues. They see, as many did before the Stockholm Conference, "an apparent conflict between environmental and developmental priorities. There are genuine fears that resources will be diverted and that a new layer of conditionality- environmental criteria- are being introduced without additional financing. There is also a growing sense of disquiet that the industrialized countries are asking the developing nations to scale down their economic aspirations to share the burden of averting the global ecological threats which are mainly due to the industrialized countries' patterns of consumption." ¹ This is familiar territory to Maurice Strong and his colleagues from the 1972 process

The principal difference between 1972 and 1992, however, is that the developing countries feel that they finally have a bargaining chip which matters. None of the subjects on the Northern agenda can be tackled without their co-operation. Perhaps the best example of this symbiosis is provided by Chinese plans to double GNP within the next 15 years. If this increase takes place with present Chinese energy technology, the effects on global CO2 emissions could be dramatic. Studies have shown however that this could be done with no increase in energy use (and therefore of CO2 emissions) if the 750,000 inefficient industrial boilers were replaced with more modern vessels. The costs would be large, but not enormous, the technology not particularly complex. But the Chinese have few incentives to bear these costs on their own- after all, the present generation of boilers works. They feel that the developed countries should bear the lion's share of these costs. The words of the recent Beijing Ministerial Conference of Developing Countries stated the extreme Third World position thus:

"While the protection of the environment is in the common interest of the international community, the developed countries bear the main responsibility for the degradation of the global environment. Ever since the Industrial Revolution, the developed countries have over-exploited the world's natural resources through unsustainable patterns of production and consumption, causing damage to the global environment, to the detriment of developing countries.

¹ Common Responsibility in the 1990's. The Stockholm Initiative on Global Security and Governance, April 22, 1991, Stockholm: Office of the Prime Minister, page 28

The developed countries, in view of their main responsibility for environmental degradation and their greater financial and technological capabilities, must take the lead in eliminating the damage to the environment as well as in assisting the developing countries to deal with the problems facing them."²

Many feel, with Maurice Strong, that the Brazil Conference represents the best chance, perhaps the only chance, the world will have this decade to break the back of these global environmental issues by anticipating and preventing their worst effects rather than simply adjusting to the consequences after they have happened. By linking these two sets of issues and by persuading governments to treat the Brazil meeting as a summit, Strong has raised the ante considerably. And so far the omens are not promising. Only limited progress has been made on the first part of the bargain- an agreement by the developed countries to reduce their CO2 emissions substantially. Little progress has been achieved on the provision of new resources to help developing countries to pursue more sustainable development strategies. Despite pious words, nothing has been done on the tricky issue of technology transfer. Finally, much thought must be given to the institutional arrangements for making all of this happen. Few believe that the existing international machinery is capable of coping with this new set of problems.

Toward a Canadian Strategy

The warnings of the Brundtland Commission that the future will be bleak unless the world turns to a course based on sustainable development have not gone unnoticed in Canada. In the words of the Prime Minister, "We believe that there are no limits to economic growth, other than those imposed by our imagination, but we do recognize that there are real limits to natural systems and resources. This is not just about the atmosphere, it is not just about the environment, it is about the future of the planet itself. And to address the environmental agenda, it is not enough to conduct research and put out information, we also need leadership and statesmanship in the international community."³ This leadership must encompass the Brundtland imperatives for sustainable development mentioned earlier both internationally and domestically. And most important, it must lead to the integration of environment and economic development at the highest levels of decision-making. Maurice Strong has made a start in this area by persuading the General Assembly to turn UNCED into the Earth Summit. But there remains no place in the international system where this integration can occur on a regular basis.

This paper therefore recommends that the promotion of sustainable development become one of the principle cornerstones of Canadian foreign policy for the rest of this century.

Strengthening the United Nations and the multilateral system has long been a Canadian interest. The end of the Cold War may provide a unique opportunity to make giant strides in this area. And UNCED may provide the first chance to test out many of the ideas for reform. The Earth Summit will be the first major international conference since the end of the Cold War. It will also be the largest summit meeting ever held. The Brazilian hosts estimate that at least 70 Heads of Government and heads of State will be attending. It

² Beijing Ministerial Declaration on Environment and Development, ED/Conf G 2, 18 June 1991

³ Notes for an address by the Right Honourable Brian Mulroney at the International Conference on the Changing Atmosphere, Toronto, June 27, 1988

would be naive to assume that any major progress will be made in restructuring by that time, but it could provide a high profile opportunity for the Prime Minister to announce Canadian leadership in this area.

And it is surely in Canadian interests to play a lead role. Support for multilateral solutions to international problems is a Canadian tradition which polls show continuing into the 1990's. And despite one or two recent results, all of the polls show that Canadians still feel that the environment is an issue of paramount importance. In fact, when questioned in an Angus Reid poll commissioned by CIDA, the majority of Canadians volunteered that the international issue which most concerned them was the threat of environmental degradation. Earlier polls taken by Environics showed an extraordinary 85% of the public believing that environmental problems poses a major threat to the survival of mankind. Expectations that the environment would disappear as a major issue after a recession had set in have also been proven to be unfounded by the latest Environics poll. Asked in May of this year what the major ingredients of an economic development plan for Canada should be, the largest number of respondents felt that environmental protection should be the critical ingredient.

And Canada's competitive position could be affected by a number of the international agreements being discussed. Canada's domestic economy is more affected by the use of natural resources than that of virtually any other developed country. As a result, agreements on global warming and forestry could have substantial effects on Canadian industry. If Germany and Japan, for example, who are already considerably more efficient users of energy than Canada, unilaterally induce their industries to become even more efficient (with CO2 reduction targets, for example), than Canada could fall even farther behind in the competitiveness race unless it reacts quickly. And as the fur and seal boycotts have shown, Canadian domestic policies which are seen to be "anti-environmental" by European and other environmental groups can easily lead to damaging boycotts of Canadian exports.

A Canadian Negotiating Strategy

Although it is beyond the scope of this paper to recommend an overall Canadian strategy for the restructuring of the multilateral system, some of the elements of such a strategy are already clear. And they coincide with a number of the areas where Canada should be attempting to make progress at UNCED. Even under the most optimistic assumptions, restructuring of the international system will take a number of years, perhaps culminating in the international conference in 1995, the fiftieth anniversary of the San Francisco Conference, envisioned by the Stockholm Declaration. The Canadian strategy for UNCED must therefore be designed both to promote long term goals for reform and to achieve significant progress in the near term.

It is also necessary to bear in mind that the Preparatory Committee has not yet discussed the institutional agenda in any detail, and it has only begun to discuss the contents of Agenda 21. This item, intended by Strong as an action plan containing elements lasting well into the next century, will contain numerous recommendations with financial consequences. The institutional structures which Canada finally supports will need to be adapted somewhat to the requirements set out in Agenda 21. With these caveats in mind, it is possible to set out a series of Canadian institutional objectives for UNCED. Many of these would also apply to the long term reform process as well:

- i) The establishment of a high level political forum for the integration of environment and economy and for the discussion of issues related to environment and security

ii) The development and implementation of a coordinated Canadian position on sustainable development throughout the multilateral system. The creation of mechanisms for the integration of environmental considerations within the programs of the international agencies.

iii) Strengthening the professional competence of the U.N. Secretariats

iv) Strengthening existing institutions, such as the United Nations Environment Program, the United Nations Development Programme and the World Bank

v) Strengthening local, national and regional institutions, both governmental, and outside government, to plan and implement policies, programmes and activities that are environmentally sustainable.

vi) The development of mechanisms for the implementation of the global conventions.

vii) Strengthening the scientific and information capacity of the multilateral system

In Canada and in other countries, the UNCED process has stimulated an extraordinary degree of involvement among three communities crucial to its success. Environmental and development ngo's, the private sector and the scientific community have all established special groupings to ensure their input in the decision-making process. More than 150 ngo's participated in the third Preparatory Committee meeting in Geneva. The International Chamber of Commerce has published its Business Charter for Sustainable Development. And, under the leadership of the prominent Swiss industrialist Stefan Schmidheiny, the Business Council on Sustainable Development has drawn together more than 30 Chief Executive Officers of some of the world's largest companies (including Toyota, Dupont, Dow Chemical, Transalta Utilities and Northern Telecom) to provide a private sector counterpart to the official UNCED deliberations. And the scientific community, so critical to the evaluation of the global change issues which provide the core of UNCED's agenda, has begun to organize itself for the Rio meeting.

While ngo's have been part of the United Nations system since the adoption of the Charter, their role has been carefully circumscribed. In acknowledgement of the increasing importance and political muscle of the non-governmental community, the UNCED Secretariat has involved ngo's in all of its working groups for Agenda 21. According to the Secretary-General, this has enriched the process considerably. The Preparatory Committee sessions have attracted wide numbers of ngos, and the rules have been set to allow opportunities for them to participate in the formal deliberations. Led by Canada, a number of the donor countries have banded together to provide funding to enable ngos from developing countries to play their part in the remaining PrepCom meetings and at the conference in Rio itself. U.N. reform will also need to focus on increasing the role of the non-governmental community.

UNCED has also attracted an unprecedented degree of interest from the private sector. The International Chamber of Commerce and the newly formed Business Council for Sustainable Development will be preparing interventions at the Conference. Strong has involved business representatives in the working group process for Agenda 21 as well. And everyone is agreed on the critical role of the private sector in mobilizing the large sums of capital that will be needed to restart the engine of development as well as prepare for the

transition toward more sustainable forms of energy development. Any plans for workable technology transfer will need to be based upon the central role of private industry.

The scientific community has also mobilized in support of more sustainable forms of development. The Intergovernmental Panel on Climate Change, mentioned earlier, has played the central role in reaching a consensus on global warming. The International Geosphere/Biosphere program represents an unusual degree of co-operation between the physical and biological scientists to assess the state of the planet. And the program on Human Dimensions of Global Change begins to involve the social scientists and policy community in the formulation of policies to deal with climate change and the other global changes.

Any Canadian positions on the institutional priorities for U.N. reform in general and UNCED in particular must be designed to take advantage of these new realities and to build them into the new institutions from the start.

1. A High Level Political Forum

The integration of environmental considerations into economic decision-making at the highest levels is at the core of the concept of sustainable development. Mechanisms for this integration are beginning to develop at the national level, for example, through the Canadian innovation of Round Tables on the Environment and the Economy and through the British practice of appointing a Junior Minister charged with environmental responsibilities for each department. Such fora are entirely lacking at the international level. Several kites have been flown by various countries to reform existing institutions, to create new institutions and to create new "non-institutions".

a) Reform of Existing Institutions

1) Reform of the Security Council- The British and the Soviets have both proposed some sort of expanded mandate for the Security Council so that it can appropriately deal with environmental security. This could include a special sub-committee of the Council or an agreement to devote a certain number of meetings of the full Council to these issues. Critics have pointed out that the agenda for the Council is already overcrowded. Adding a permanent committee or subcommittee to the Council might serve to overcome that objection, but it will not meet the fundamental objection of the developing countries to expanding the role of a body that is of such limited membership. The developing world will probably hold any ideas of changing the Council's mandate hostage to some acceptance of changes in its composition.

2) Reforming the Trusteeship Council- The Trusteeship Council is one of the original organs of the United Nations system. With the imminent demise of apartheid, the Trusteeship Council would appear to have outlived its usefulness. Maurice Strong, with Soviet and other support has long believed that the Trusteeship Council could be transformed into a Council of Trustees of the Earth when its original function is fulfilled. Strong also believes that this can be done without a revision of the Charter, a point disputed by many lawyers.

b) Creation of new institutions

1) Creation of an Environmental Security Council-This has also been proposed by the British, the Soviets and the Norwegians. It would be a body limited in membership, perhaps without a veto.

2) The Hague Initiative. Perhaps the most unusual document of recent years emerged from the Hague summit of March 1989. In it the 24 leaders (since expanded by an additional 19), led by France and The Netherlands called for the creation of a new institutional authority to combat global warming. Unlike any other international bodies with clout, its decisions could be reached without unanimous consent and without any single state enjoying a veto. Furthermore, they also called for some role in the enforcement of its decisions by the World Court. Trade sanctions could be imposed on countries who repeatedly defied its rulings. A version of this idea was subsequently proposed by President Mitterand at the G-7 Summit of the Arch later that year. It should be noted that Prime Minister Mulroney was one of the original signatories of this declaration. There have also been rumours prior to the recent attempted coup in the Soviet Union that President Gorbachev intended to bring a version of the Hague "solution" to the summit at Rio.

3) An Economic Security Council-This would be composed of around 24 members and would be the centerpiece of the "economic U.N.", much as the Security Council animates the political U.N. It would be served by an independent secretariat and representation would be at the Ministerial level.

Any of these initiatives is workable. The existing international machinery, reflecting as it does the realities of 1945 and the immediate post war era, is incapable of coping with this new set of problems which are likely to dominate the U.N. agenda for the rest of this century. As the Prime Minister pointed out on his recent trip to the Far East, any Security Council which excludes Japan as a permanent member lacks credibility as it does not reflect the new power balance. Similar arguments can be made for Germany and a number of the larger developing countries such as Brazil and India. Recently, there has been a flurry of studies and statements about the necessity for reform of the United Nations system. This is best exemplified by the Stockholm Initiative⁴. Chaired by the Prime Minister of Sweden, this group represented all of the major independent commissions of the 1980's - from Brandt to Brundtland. It called for the setting up of an Independent Commission on Global Governance to examine all aspects of the international system and to make recommendations to a World Summit on Global Governance, probably timed to coincide with the 50th anniversary of the San Francisco Conference in 1995.

Canada should follow up the Prime Minister's commitment to support Japanese membership of the Security Council with a major initiative on reform of the Council. This would include expanding the number of permanent members, changing its mandate and its place within the U.N. system

A number of the other solutions proposed, such as a special committee of the General Assembly, or regular meetings of Environment Ministers cannot to accomplish the desired purpose of their own.

c) Creation of a "non-institution"

⁴ Common Responsibility in the 1990's; The Stockholm Initiative on Global Security and Governance, Stockholm: Office of the Prime Minister, 1991

Council reform is a long term issue. Sustainable development needs action now. While the discussion of U.N. reform is taking place, Canada should explore the creation of a "non-organization" similar to the G-7. Since its creation, the G-7 summit has served the enormously useful purpose of focussing the leaders of the 7 major industrial democracies on a range of economic topics. At the Toronto summit of 1988, Canada succeeded in introducing the subject of environment and sustainable development for the first time. Since that summit, environment has become a staple part of the G-7 diet. But the G-7 has its limitations in dealing with global issues. It is seen by the Third World as a rich country club and it excludes the Soviet Union and Eastern Europe. The membership of an expanded summit would need to be the subject of careful discussion and negotiations. The precedent of the Cancun summit of the early 1980's (although the summit itself was a failure) could provide some guidance in this regard.

Canada should propose a meeting of a "non-organization" consisting of the G-7, the Soviet Union and a representative number of developing countries. It would meet at the Heads of Government level, perhaps one year after the Earth Summit. It would review the integration of environment and economics; environment and security and any progress on Agenda 21 or other items.

The group could meet annually or biennially as desired. If and when the reform of the United Nations is implemented, this "non-organization" can easily go out of business. If international reform efforts founder once again, this group might become more formal. To bring more focus to its deliberations, it would establish a distinguished independent panel of representatives from the ngo community, the private sector and the scientific community chosen in their private capacities. This group would be responsible for the regular publication of a State of the Globe report. Ample precedents exist for such a publication in the official realm- the World Bank's World Development Report and UNDP's Human Development Report; and in the unofficial sphere- Worldwatch Institute's State of the World Report and WRI's World Resources Report.

This group would have no official status. But neither does the G-7. It would succeed or fail according to its ability to attract Heads of Government. It could be inaugurated in much the same way as the G-7 summit. Canada has a useful negotiating track for "trying out" this proposal. The Commonwealth Heads of Government meeting in October in Harare would allow for discussions with Britain, a G-7 member, with India, perhaps the most intransigent of the developing countries in the UNCED process, and with a number of other key developing countries. The Francophone summit the following month, will provide similar opportunities for consultation. If these consultations yield positive results the Prime Minister, together perhaps with the President of Brazil on his spring visit to Ottawa, could issue an invitation.

2. Environment/Development Integration

The international system has grown in a haphazard fashion over the past 40 years. Because of the weakness of the central U.N. Secretariat and the conflicting goals of governments, the specialized agencies and their heads have come to behave like mediaeval baronies, feuding among themselves and with the centre. This situation is especially damaging to the prospects of sustainable development, requiring as it does the integration of both environmental and economic concerns. A number of solutions have been proposed to improve this co-ordination.

Many of these involve rejuvenating or reorganizing the existing machinery. They usually center around reform of the U.N. Economic and Social Council, the various Committees of the General Assembly and the Administrative Committee on Coordination. These are perennial favourites for any discussion of U.N. reform. Perhaps the latest round of discussions will bear fruit and new coordination machinery may emerge at the bureaucratic level. It is fair to say, however, that few are optimistic about the chances of success in the short run.

This is an important area for Canada. Canada is one of the strongest supporters, both politically and economically, of the specialized agencies. Canadian voluntary contributions to the UNDP, UNFPA and other organizations are twice the level that they would be had the country paid its "normal" U.N. pro rata share. Coordination and efficiency are therefore in the Canadian interest.

A Canadian strategy in this area should begin with the Secretary-General. As Childers and Urquhart point out⁵, the Secretary-General has considerable bureaucratic powers that have never been used in this area. If the next Secretary-General were to be chosen according to different criteria than most of his or her predecessors, many of these problems could be solved. The present system for choice of a Secretary-General is less elaborate than that used by most medium sized Canadian Universities in the selection of a President. Canada should work with other interested countries to ensure that the next Secretary-General is chosen for his or her competence rather than for simple geographic and geopolitical reasons. Canada could also use its influence, along with that of other interested countries such as the Nordics and the Dutch, to make certain that the Director-General for International Economic and Social Co-operation is also chosen on the basis of proven merit. This post, created to help overcome the structural weaknesses of the system, has not lived up to its expectations. The post could also be renamed, and its responsibilities reorganized accordingly, to make it into the Directorate General for Sustainable Development. It is difficult to overemphasize the importance of these two appointments.

Canada would also do well to get its own house in order. As with most other countries, the Canadian representatives to the U.N. specialized agencies are appointed and instructed by the relevant departments. It is not unusual, therefore, to see Canadian delegates presenting incompatible views on the same subject to two different fora. If the Government of Canada wishes to see greater co-ordination among the U.N. agencies, it must demonstrate that it can do so at home. The Round Table should advise the Prime Minister to establish a mechanism, perhaps within the PCO to ensure that all Canadian positions in the U.N., the Bretton Woods Institutions and the specialized agencies are consistent with the principles of sustainable development.

Even after a Secretary-General has been appointed and better co-ordination has been ensured within the Government of Canada, there is still a need for some device to bring about better co-ordination within the U.N. at the policy level. And this must be done at the Ministerial level. The Nordic study on the U.N.'s development activities called for the creation of an International Development Council which would bring together Ministers of Development.⁶

⁵ Urquhart and Childers, *A World in Need of Leadership: Tomorrow's United Nations*, Motala, Sweden, 1990

⁶ *The United Nations in Development: Final Report by the Nordic UN Project*, Almquist and Wiksell International: Stockholm, 1991

A number of other reports have called for the creation of a Sustainable Development Commission, composed of Ministers of Finance or Economics, reporting directly to the General Assembly⁷. The latter would obviously carry more weight. It could also provide a more direct link to the Bretton Woods institutions, who tend to view themselves as apart from the U.N., but who tend to be assuming more and more importance in the debate over sustainable development. A representative group of Finance Ministers meets twice a year in their capacity as members of the World Bank/IMF Development and Interim Committees. They have discussed environment and development as they effect the World Bank in a number of these meetings. In fact, the decision to establish the Global Environmental Facility arose from one of these discussions. Canada could propose that the World Bank Development Committee form the nucleus of a Sustainable Development Commission. It would have to be serviced by a small group, based in the central U.N. Secretariat and drawing on some of the resources of the Bretton Woods institutions. The present UNCED Secretariat would serve as the nucleus of this group.

As an interim, Canada might seek to make the present coordinating mechanism more real. Canada could join with a number of other sympathetic countries to insist in the Governing Councils of the various bodies that the agency heads personally attend meetings called by the new Secretary-General or DGIESC. The threat of budgetary or other sanctions could go a long way to ensure better operation of the present system. Canada might also wish to consider the adoption of the smaller, more permanent executive bodies proposed in the Nordic report⁸. Similar to the system of Executive Directors in operation at the World Bank, these bodies would ensure more continuous supervision of the activities of these organizations.

3. Making Better Use of What Exists

Although almost all of the international agencies have some role in the implementation of sustainable development, the U.N. Environment Programme and the Development Programme are the most central in the U.N. system. The World Bank has taken the lead among the multilateral finance institutions.

Considering the size and precarious nature of its financing, UNEP has a good many accomplishments to its credit. It took on the ozone problem when few believed it of great importance and shepherded it through the Vienna Convention and the Montréal protocol and the creation of the multilateral fund. It alerted the world to the dangers of global warming and, together with WMO, carried this concern through to the present negotiations on an international convention. Its regional seas programs have often succeeded in persuading governments which are mutually hostile to make common cause to save the environment. Its legal program has pioneered in the development of so-called "soft law". And its Earthwatch Program has helped to mobilize both scientific and technical information on the state of the planet. Its Governing Council has been more open to interactions with both ngos and the private sector than most in the U.N. system.

UNEP should be strengthened both in budget and in staff to enable it to carry out its functions more effectively. Monitoring and assessment, the development of new legal instruments, and new initiatives in the marine

⁷ Report of the Aspen Institute Working Group on International Environment and Development Policy (draft) July 25, 1991

⁸ Ibid, Nordic U.N. project, page 20

and coastal area are of considerable importance. It is also important that UNEP retain its mandate as the environmental "conscience" of the United Nations system when the the mandate for sustainable development becomes entrenched in the central secretariat of the U.N.

The key to the success of any sort of accommodation between the "two agendas" mentioned at the beginning of this paper will be the willingness of the developed countries to make available some sort of additional financing for more sustainable forms of development and for capacity building. The financial aspects of these transfers is more fully addressed in the paper on finances. But no matter how much external assistance is eventually provided to the Third World, it is evident that most of the human and financial resources for sustainable development must come from the poorer countries themselves. Recent studies by the World Bank and by the U.N. Development Program indicate that the most effective investment for the relief of poverty has been in human capital. This will also be true for sustainable development. The UNCED Secretariat has proposed that UNDP become the lynchpin of an ambitious and necessary scheme to greatly increase the capacity of developing countries to plan and implement sustainable development. Under this plan, each region of the developing world would produce a plan to support a network of national institutions for policy studies, technology transfer and scientific research in support of sustainable development. Canada should support this initiative if it specifically provides for the strengthening of national and regional ngo networks. It reinforces UNDP's role as the main provider of technical assistance- a role that has been eroded in recent years by the multilateral banks setting up many of their own systems. It increases the effectiveness of Canada's considerable investment in UNDP. It increases the capacity of the developing countries to participate in UNCED and other processes as equal partners.

With the advent of the Global Environmental Facility, a \$1.6 (U.S.) fund, the World Bank has again demonstrated its ability to mobilize substantial (although insufficient) amounts of capital for development. The accompanying paper on finance discusses the various options for providing critical additional funds for sustainable development while still retaining the main focus on poverty alleviation. This paper focuses on the institutional aspects of the Bank's activities. With Michael Wilson's intervention at the World Bank meeting in Berlin in 1988, Canada demonstrated that it was prepared to insist on the inclusion of environmental considerations in Bank lending operations. Although Bank practices have improved somewhat in the interim, the agency still has a good distance to go. And special care must be taken to ensure that the advent of the GEF and, perhaps, other dedicated environmental funds, does not divert attention away from the need to fully integrate environmental considerations into all of the Bank's lending. Continued intervention by Canada and other countries of similar mind in the Bank's Governing Bodies (especially the Development Committee if it provides the nucleus for a Sustainable Development Commission) will be helpful in this direction.

Given that most of the planning and implementation for sustainable development must occur at the country level, Canada should investigate with the Bank (and to a lesser extent, with UNDP) the use of the existing country programming process to help developing countries to design and implement sustainable development strategies. Canada should support the UNCED Secretariat recommendation that "contracts" could be made between donors or groups of donors and countries. These contracts would contain specific commitments by donor governments to provide long term sources of finance in exchange for specific commitments by recipients to

such things as reductions in rates of population growth, preservation of biological diversity and tropical forests and more sustainable energy strategies. Although the developing countries have been very vocal in their resistance to the concept of "conditionality", recent experience by a "dialogue group" of North and South American leaders suggests that a good deal of movement is possible, including substantial concessions by the South, if these discussions are held in a reciprocal fashion⁹. The group found that concessions might be possible even on such previously politically taboo subjects as family planning, land reform and the preservation of tropical forests if there is some sense that some of the Northern taboos such as agricultural subsidies, debt relief and the like were also on the table. Canada could play a crucial pivotal role in persuading both some of the critical Southern recipients and the Northern donors to try some of these "contracts" on a trial basis. The existing donors' consultative groups and country roundtables organized by the Bank and UNDP could provide ideal fora for some of these "contracts" to be explored.

4. Treaty Secretariats

Canada will play a critical role in the negotiations for a new convention on climate change, through its Chairmanship of Working Group 2. It should also continue to press for an eventual convention on forests, although it seems unlikely that anything substantive can be assembled for Rio. While biological diversity seems a long shot, it is still possible.

Once a convention is negotiated and signed, there will be pressure for the creation of a Secretariat to serve it and a fund to help with its implementation. In fact, as the Beijing declaration has stipulated, it is unlikely that the developing countries will agree to any of the conventions unless there are strong indications that funds will be forthcoming.

Although each of these Secretariats will be very different, depending on the principal countries involved, Canada should insist on four major objectives:

- 1) That voting power be based on something other than financial contributions or straight calculations of population size.
- 2) That as far as possible, these Secretariats should rely on existing sources of expertise within the international system. Over time, this could result in the partial rationalization of a compartmentalized bureaucracy based on the compartments of the 1960's and 1970's.
- 3) That each Secretariat have a Canadian style "stakeholder" advisory group composed of representatives of the scientific community, the ngo community and the private sector. And that the members be chosen on merit.
- 4) That the policy decision making power over the fund be separated from the fiscal management and disbursement of that fund. This would allow funds to be spent rationally through a revamped GEF or the "sourcing fund" mentioned in the finance paper.

5 A Global Watch System

⁹ A New World Compact

When scientists began to sound the alarm about the possible influence of CFCs on the earth's ozone layer, few suspected the extent to which the damage had already been inflicted. The discovery of the "ozone hole" over Antarctica surprised all but a small proportion of the scientific community, let alone the policy community. Subsequent research is revealing that the deterioration of the ozone layer is proceeding even more rapidly.

The human race can ill afford many more such surprises. As mentioned before, the scientific community worldwide is developing new co-operative approaches to the identification of these problems before they occur. But there is a need for a new mechanism to bring to bear the best governmental and non-governmental scientific advice. Canada should support proposals for an independent commission, drawing heavily on such non-governmental bodies as the International Council of Scientific Unions, the World Conservation Union (IUCN), on such U.N. agencies as UNEP, WMO and the like, the expertise of the private sector and of national governments. Such a commission could be part of the commission suggested in item 1 above or could be a separate organization designed to provide "early warning" of environmental problems, assess their risks and recommend appropriate courses of actions. Such a body would not need an extensive secretariat nor a large budget, since it would be drawing on a great deal of ongoing work. It could, however, be politically attractive and could help to galvanize the scientific community.

All of the above recommendations are in line with Canada's traditional support of the U.N. system and both its development and peacekeeping functions. The indications from the recent polls are they would receive substantial support from the Canadian people. They might also provide some political "elbow room" desperately needed if UNCED is to succeed. They are also in line with the principle listed above that a minimum of new institutions be created and that anything which is done can be seen to facilitate a future thoroughgoing reform of the international system.

But none of these suggestions will succeed if it is seen as an exclusive Canadian initiative. At the moment the politics of the UNCED process are bad. The two agendas have not been merged. No real progress has been made on institutional questions. And U.S. resistance to discuss the financial issues has stalled progress there. This suggests an ideal role for the traditional Canadian strengths of coalition building and North/South dialogue. Because time is short and UNCED will be conducted at the highest level, the Round Table should reiterate its belief that the Prime Minister and his office should become involved very soon. The timing for Canadian exploratory discussions is opportune. A chance to correct some of the shortcomings in the U.N. Secretariat will arise with appointment of the first post cold war Secretary-General. The Prime Minister will be meeting with his colleagues from the Commonwealth in October. This would not only provide an opportunity to exchange views with Prime Minister Major who was supportive of UNCED as host of the G-7 summit, it would also provide an opportunity for liaison with Australia and New Zealand, with whom Canada has been working closely throughout the PrepCom process. It would also offer the Prime Minister a representative forum of Third World members of the Preparatory process, especially India and Malaysia who have been active from the beginning. The World Bank/IMF meetings in Bangkok, also in that month would present an opportunity to explore some of the coordination initiatives. The Francophone summit will also offer opportunities to further hone any initiatives emerging from the Harare meeting. Finally, the visit to Canada of the President of Brazil next spring would offer the opportunity to further explore some of these issues prior to the decisive final meeting of the UNCED Preparatory Committee in March and April.

A LITTLE VOICE

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The Stockholm Declaration on the Human Environment

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The Conference on the Human Environment, held at Stockholm from June 5 to 16, 1972, was in many respects the most successful international conference held in recent years. In a two-week period it adopted not only a basic Declaration and a detailed resolution on institutional and financial arrangements, but also 109 recommendations comprising an ambitious action plan.¹ The Declaration contains a set of "common principles to inspire and guide the peoples of the world in the preservation and enhancement of the human environment." The resolution on institutional and financial arrangements proposed the establishment by the General Assembly of the United Nations of: an Intergovernmental Governing Council for Environmental Programmes, to provide general policy guidance for the direction and coordination of environmental programs; an Environment Secretariat headed by an Executive Director; an Environment Fund, to provide additional financing for environmental programs; and an

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1. The official text of these documents is contained in the REPORT OF THE U.N. CONFERENCE ON THE HUMAN ENVIRONMENT, U.N. Doc. A/CONF.42/14, at 2-63, and CORR.1 (1972). They have been reprinted in CENTRE FOR ECONOMIC AND SOCIAL INFORMATION AT U.N. EUROPEAN HEADQUARTERS, ENVIRONMENT: STOCKHOLM (1972) (there are two editions of this widely distributed document, the second of which though less colorful is more complete); in INT'L LEGAL MATS. 1416-69 (1972); SWEDISH MINISTRY FOR FOREIGN AFFAIRS, FÖRSTA NATIONERNA MILJÖKONFERENS I STOCKHOLM 83-141 (Aktstycken utgivna av Utrikesdepartementet, Ny serie H1251, 1972) in English). The text of the Declaration is also published in 67 DEP'T. STATE BULL. 116 (1972).

interagency Environmental Co-ordinating Board for the purpose of ensuring cooperation and coordination among all bodies concerned in the implementation of environmental programs. The Action Plan concentrates on environmental assessment, through the establishment of an Earthwatch, designed to identify and measure international environmental problems and warn against impending crises; environmental management acting on the basis of Earthwatch assessments; and the necessary supporting measures, including education, training, and public information.

The success of the Stockholm Conference was based on a complex preparatory process, during which agreement was reached among the major groups of countries on most issues, so that only a limited number of questions had to be resolved at the Conference itself. The preparation for the Conference was primarily in the hands of a small but well-organized and efficient Conference Secretariat, headed by Maurice F. Strong, former President of the Canadian International Development Agency, a man with an uncanny ability of finding at the last minute the compromise formula which had eluded everyone else, and a singleminded persistence which somehow melted the many obstacles on the path to Stockholm. The papers for the Conference were the result of a multifaceted interaction between the Secretariat, panels of independent experts, and intergovernmental working groups.³ What happened in Stockholm was just the visible top of the iceberg; a whole mountain of arduous preparatory labor was the necessary prerequisite of the final success. While many documents are not available, and some stages thus may have been missed, an attempt will be made in the first part of this paper to trace the main steps of this intricate legislative process, through which agreement was finally reached on the Declaration; and in the second part, the text of the Declaration will be analyzed in detail. Similar studies need to be made in the future of the other Stockholm documents.

DECLARATION ON THE HUMAN ENVIRONMENT

When Sweden suggested in 1968 the convening of an international conference on the problems of human environment, the main objectives were to "create a basis for comprehensive consideration within the

3. See, e.g., Gardner, *The Role of the United Nations in Environmental Problems*, 16 INT'L ORG. 237, at 243 (1972); Johnson, *The United Nations' Institutional Response to Stockholm: A Case Study in the International Politics of Institutional Change*, id.,

United Nations of the problems of human environment," and to "focus the attention of Governments and public opinion in various countries on the importance of the problem."⁴ These objectives were endorsed by the Economic and Social Council and the General Assembly in their resolutions relating to the convening of the conference.⁵

The idea of a Universal Declaration on the Protection and Betterment of the Environment seems to have been originated by the Intergovernmental Conference of Experts on the Scientific Basis for Rational Use and Conservation of the Resources of the Biosphere, convened in Paris by UNESCO in September 1968.⁶ It was immediately seconded by the U.N. Advisory Committee on the Application of Science and Technology to Development,⁷ and by the Secretary-General of the United Nations.⁸ The recommendation of the Secretary-General was in turn endorsed by the Economic and Social Council and the General Assembly.⁹

The Preparatory Committee for the Conference, established under General Assembly Resolution 2581, had before it a recommendation by the Secretary-General that it draw up a declaration on the human environment dealing with "rights and obligations of citizens and Governments with regard to the preservation and improvement of the

3. 45 U.N. ECOSOC, Annexes, Agenda item 12 (Doc. E/4466/Add.1) at 2 (1968).

4. ECOSOC Res. 1346, July 30, 1968, 43 U.N. ECOSOC, Supp. 1 (Doc. E/4361) at 8 (1968); G.A. Res. 2398, Dec. 3, 1968, 23 U.N. GAOR, Supp. 18 (Doc. A/7218) at 2 (1969).

5. UNESCO, *USE AND CONSERVATION OF THE BIOSPHERE: PROCEEDINGS OF THE INTERGOVERNMENTAL CONFERENCE OF EXPERTS ON THE SCIENTIFIC BASIS FOR RATIONAL USE AND CONSERVATION OF THE RESOURCES OF THE BIOSPHERE 229-30* (1970). See also L.K. CALDWELL, *IN DEFENSE OF EARTH: INTERNATIONAL PROTECTION OF THE BIOSPHERE* 143 (1972); *International Conference on the Biosphere*, 14 UNESCO CHRONICLE 414 (1968); UNESCO Doc. SC/MD/9, at 31 (1969); 23 U.N. GAOR, Annexes II, Agenda Item 91 (Doc. A/7291) at 2 (1968).

6. U.N. Doc. E/AC.52/L.65, Annex IV, para. 6 (1969).

7. U.N. Doc. E/4667, paras. 89, 120 (1969). According to the Secretary-General, one of the objectives of the Conference on the Human Environment could be to adopt certain basic premises and considerations to guide the action of governments and intergovernmental organizations, as well as of individuals in relation to the environment. Such premises could include the recognition of the environment as a public resource essential to the survival of man, the acknowledgment of the responsibility of governments, local authorities, industrialists, agriculturists, as well as individual citizens in the maintenance and enhancement of environmental quality, the need for establishing effective and rational management of the environment and of its resources.

8. *Id.*, para. 89. This report is reprinted in HOUSE COMMITTEE ON SCIENCE AND AERONAUTICS, *A READER IN INTERNATIONAL ENVIRONMENTAL SCIENCE*, 92d Cong., 1st Sess. 69, at 93, 120-21 (1971).

9. ECOSOC Res. 1448, Aug. 6, 1969, 47 U.N. ECOSOC RESOLUTIONS (Doc. E/4735)

human environment."⁹ The Committee agreed that a draft declaration should be presented to the Conference and asked the Secretary-General to prepare suggestions as to the content of the declaration, after consultation with the Member States. The Committee adopted also several guidelines for the preparation of the declaration,¹⁰ which were later endorsed expressly by the Economic and Social Council.¹¹

At its second session, the Preparatory Committee established an Intergovernmental Working Group for the preparation of the draft declaration on the basis of governments' replies to a questionnaire sent by the Secretary-General in December 1970.¹² The Committee agreed that the Declaration should be "inspirational and concise"; it should be "readily understandable by the general public so that it could serve as an effective instrument for education and stimulate public awareness and community participation in action for the protection of the environment." While most members of the Committee felt that the Declaration should contain "universally recognized fundamental principles recommended for action by individuals, States and the international community," there was some divergence of views on the question "to what extent the Declaration should also attempt to lay down specific guidelines for action." The view prevailed that the Declaration should merely outline "broad goals and objectives," and that a detailed action program should be embodied in other documents to be adopted by the Conference.¹³ The crucial paragraph of the Report dealt with the legal effect of the Declaration as follows:

It was pointed out that, by its very nature, the Declaration should

9. U.N. Doc. A/CONF.48/PC/3, para. 16 (1970).

10. U.N. Doc. A/CONF.48/PC/6, para. 27(32)-(38) (1970). These guidelines were as follows:

(35) The declaration should be a document of basic principles, calling mankind's urgent attention to the many varied and interrelated problems of the human environment, and to draw attention to the rights and obligations of man and State and the international community in regard thereto.

(36) The declaration would serve to stimulate public opinion and community participation for the protection and betterment of the human environment and, where appropriate, for the restoration of its primitive harmony etc., in the interest of present and future generations. It would also provide guiding principles for Governments in their formulation of policy and set objectives for future international co-operation.

(37) In formulating the declaration on the human environment, due account has to be taken of the environmental stresses caused by the differences in social and economic development between various parts of the world.

11. ECOSOC Res. 1936, July 27, 1970, 49 U.N. ECOSOC, Supp. 1 (Doc. E/4904) at 8 (1970).

12. The text of the questionnaire and the replies of the Governments are reproduced in U.N. Doc. A/CONF.48/PC/WG.1/CRP.4, and Add.1 and 2 (1971).

13. U.N. Doc. A/CONF.48/PC/9, paras. 27-32 (1971).

not formulate legally binding provisions, in particular as regards relations between States and individuals, or as between the latter, which were considered in principle to be governed by national legislation. The Declaration could, however, in the view of some delegations, make an important contribution by universally recognizing the fundamental need of the individual for a satisfactory environment which permits the enjoyment of his human rights. Other delegations were of the opinion that the Declaration could contain a separate section embodying general principles elaborating the rights and duties of States with respect to the environment. Some delegations favoured emphasis in the Declaration on the responsibilities of States and the need for solidarity in combating environmental problems.¹⁴

The Committee also was worried about the relationship between international and domestic measures, and expressed the view that the Declaration should "focus on the need for States to legislate internally to protect and preserve the environment, as well as on the need for international co-operation for the same purpose."¹⁵

Another issue which arose in the Committee later complicated the drafting of the Declaration. For the moment, the Committee agreed that "the relationship between environment and development is one of the issues of crucial importance and it would be useful to make a particular reference in the Declaration to the protection of the interests of developing countries."¹⁶

Finally, some representatives expressed themselves in favor of including in the Declaration a definition of the term "human environment," while others felt "that it might be difficult at the present stage to reach agreement on a satisfactory definition which would not be unduly restrictive; and that an attempt to formulate a definition might unprofitably delay the preparatory work on the substance of the draft Declaration."¹⁷

The Intergovernmental Working Group on the Declaration had a difficult task before it.¹⁸ It decided to concentrate on a preamble and a statement of fundamental principles, and referred back to the Preparatory Committee the question of the need to formulate general

14. *Id.* at para. 33.

15. *Id.* at para. 34.

16. *Id.* at para. 35.

17. *Id.* at para. 36.

18. For an excellent analysis of the principal issues before the first session of the Working Group, see Robinson, *Problems of Definition and Scope*, in *LAW, INSTITUTIONS AND THE GLOBAL ENVIRONMENT* 44, at 74-85 (J. L. Hargrove ed. 1972).

guidelines for action by states and international organizations.¹⁹ While the Working Group presented to the Preparatory Committee a draft of a preamble and seventeen fundamental principles, the report acknowledged lack of agreement on the draft as a whole and on practically every paragraph of it. In particular, the draft was attacked on the grounds that it "unduly dissociated the environmental issues from the general framework of development and development planning, in such a manner as to render it an instrument for purely restrictive, anti-developmental and 'conservationist' policies," and that it did not put in the forefront the basic principle that each state has inalienable sovereignty over its environment.²⁰

The Preparatory Committee continued to insist that the Declaration should be "concise and inspirational, embodying the aspirations of the world's people for a better environment";²¹ decided that the Declaration should not include "specific guidelines for action which would find their place elsewhere in the programme of the Conference"; and agreed that the Declaration should be based on "well-established principles of international law, notably those embodied in the United Nations Charter, including the principle of national sovereignty and international co-operation." Views were also expressed on various portions of the Declaration, and the Working Group was asked to develop the draft further, without confining itself to the previous text.²²

The Working Group produced a new text of a preamble and 23 principles, differing considerably from the first one, but in view of the continuing disagreements its report made clear that this draft was not to be considered final.²³ Nevertheless, the Secretary-General expressed the hope that the Preparatory Committee would endorse the draft texts and submit them to the Conference.²⁴ In his usual optimistic spirit, Mr. Strong, the Secretary-General of the Environ-

19. U.N. Doc. A/CONF.48/PC.11, paras. 226-34 (1971).

20. U.N. Doc. A/CONF.48/PC.12, Annexes I and II (1971), especially Annex II, paras. 3, 38.

21. Some delegations felt that the draft fell so short of being inspirational that they suggested that the Secretariat should engage a professional writer to improve the language of the Declaration. U.N. Doc. A/CONF.48/PC.13, para. 159 (1971).

22. *Id.* at paras. 149-63 (1971). The draft Declaration was also criticized at the 31st session of the Economic and Social Council, and some representatives suggested that "a fresh attempt" be made to reach a consensus on the matter. REPORT OF THE ECOSOC ON THE WORK OF ITS 30TH AND 31ST SESSIONS, 36 U.N. GAOR, Supp. 3 (Doc. A/8403) at 47 (1971).

23. U.N. Doc. A/CONF.48/PC.16, para. 3 and Annex III (1971). The new preamble was largely based on a United States draft. See U.S. Press Release USUN-1(72) (1972).

ment Conference, in his opening statement to the Preparatory Committee, commended the Working Group for doing its job well and for preparing "a compelling document that should give inspiration and hope to people everywhere"; and expressed his belief that the document "merits the attention of the Conference in its present form."²⁵

In introducing the draft to the Preparatory Committee, the Chairman of the Working Group, Mr. Migliuolo (Italy), explained that:

[T]he draft prepared by the Group was based on the recognition of the rights of individuals to an adequate environment, the responsibility of States for damage to the environment of other States, or of areas beyond the limits of national jurisdiction resulting from activities within their own jurisdiction, and the particular interests of developing countries.²⁶

The Preparatory Committee recognized that the draft represented "a realistic attempt to reconcile different views and interests," and that, though it could be improved upon, "great care should be taken not to destroy the delicate balance on which it rested." Without discussing the substance of the document, the Committee agreed to forward the draft to the Conference, it being understood that this action "did not imply any expression of approval or disapproval thereof on the part of the Preparatory Committee." It was made clear that all delegations would remain free to submit to the Conference not only drafting suggestions and interpretative statements, but also substantive amend-

25. U.N. Doc. CESI Note/71, at 4 (1972). Ambassador Phillips (U.S.), in a similar vein noted that the draft represented:

a fairly high degree of consensus among the members of the 27-nation drafting group, as well as a number of other UN members that sat in as observers and gave their views. It is of course a compromise document. As a practical matter it is doubtful whether it would be advisable at this stage to seek further changes in it—given the delicate balance of views in the present text on such questions as development and environment, and the degree of responsibility of states to respect each other's interests in environmental matters.

While acknowledging that the draft will not fully satisfy anybody, he expressed the view that:

if the Declaration, approximately as it now stands, is adopted at Stockholm, it will be a highly valuable document, both in educating world public opinion and in laying at least a foundation for the creation of future international law in the field of the environment.

U.S. Press Release USUN-15(72), at 4 (1972). Interesting proposals for changes in the Declaration were suggested by the Secretary of State's Advisory Committee on the Stockholm Conference, but they do not seem to have been presented at Stockholm. For their text see SECRETARY OF STATE'S ADVISORY COMMITTEE ON THE 1972 UNITED NATIONS CONFERENCE ON THE HUMAN ENVIRONMENT, STOCKHOLM AND BEYOND 141-45 (May 1972).

its.²⁷ The draft was thus saved from further tinkering and was issued as one of the basic Conference documents, without any indication as to remaining areas of disagreement.²⁸

In the general debate at the Stockholm Conference many speakers stressed the importance of the Declaration, and some of them urged that it be adopted without any amendments, in order not to imperil the fragile consensus achieved in pre-Conference consultations. Some speakers, while willing to accept the draft, expressed dissatisfaction with its inadequate treatment of the needs of developing countries. Finally, there were some who insisted on their right to propose amendments, and pointed out that many participants in the Conference had not had a chance to express their views during the preparatory process.²⁹

Though Mr. Strong implored the Conference not to endanger the consensus by trying to improve the draft,³⁰ on request of the People's Republic of China, as amended by Iran, a working group on the Declaration was established by the Conference.³¹ In the Working Group, China again took the initiative in suggesting amendments and to the last minute insisted on the adoption of some of its ten major proposals.³² This opened the way to a blizzard of amendments,³³ and it was only thanks to the strong chairmanship of Mr. Taieb Slim (Tunisia) and the patient work of the rapporteur, Mr. Bacon (Canada), of the Swedish Legal Adviser, Mr. Hans Blix, and of Mr. Strong and his associates that, after an all-night session, a draft emerged on the last day of the Conference.³⁴

The Working Group agreed on a revised text of 21 of the 23 prin-

27. *Id.* at paras. 78-83.

28. U.N. Doc. A/CONF.48/4, Annex (1972).

29. U.N. Doc. A/CONF.48/14, at 83 (1972).

30. U.N. Press Release IIE/S/8, at 5 (1972).

31. U.N. Doc. A/CONF.48/14, at 86-88 (1972). China first proposed an ad hoc committee, but Iran's amendment suggesting a working group instead was accepted by the Conference.

32. The sessions of the Working Group were secret, but the Chinese proposals somehow reached the press. See Stockholm Conference ECO, June 10, 1972, at 1-3, 3; *Id.*, June 14, 1972, at 1, 8. For an excellent comment on China's role at the Stockholm Conference see Timmler, *Stockholm Conference on the Human Environment*, 23 *AUSTRALIAN JOURNAL* 450-60 (English ed., 1972). The principal Chinese amendments may be found in U.N. Doc. A/CONF.48/WG.1/CRP.23 (1972).

33. For a list of the amendments see U.N. Doc. A/CONF.48/INF.7, at 17-18 (1972). Some of them are discussed in C. PELL & C. CAIR, *UNITED NATIONS CONFERENCE ON THE HUMAN ENVIRONMENT: REPORT TO THE SENATE*, 92d CONG., 2d Sess. 6-7 (1972) [hereinafter PELL-CAIR REPORT].

34. For good descriptions of the final stage of the drafting of the Declaration, see Jacobsen, *A Call to Environmental Order*, 28 *BULL. OF THE ATOMIC SCIENTISTS*, Sept. 1972, at 21-22; Keys, *Stockholm plus and minus*, 27 *WORLD FEDERALIST*, July/August 1972, at 10-11; McLin, *Stockholm: The Politics of 'Only One Earth'*, 7 *ENVIRONMENTAL REPORTS* (West Europe Series), June 1972, at 8-9.

ciples submitted by the Preparatory Committee; add our new principles; decided to refer to the General Assembly of the United Nations old Principle 20 relating to the supplying of information by states on activities within their territory which might have an adverse effect on the environment in areas beyond their jurisdiction; and referred to the plenary session for final decision old Principle 21 relating to nuclear weapons which China considered too narrow as it did not include "inhuman biological and chemical weapons." Other states, without asking for further amendments, made interpretative statements which became part of the record, while China repeated its reservations. The Conference decided to add a revised version of old Principle 21 as new Principle 26, and adopted the Declaration by acclamation.³⁵

Once the painful process of hammering out the principles was concluded, many states voiced praise for the final result. During the debate in the plenary session, the Indian representative said that "the Declaration represented an important milestone in the history of the human race," and that it was "a starting-point in the task of making the planet a fit place for future generations." He expressed the hope that the governments of countries not represented at the Conference — the Soviet Union, Cuba, and other Communist countries (with the exception of Romania and Yugoslavia) — would also subscribe to "the principles enshrined in the text."³⁶ The representative of Chile felt that "the Declaration constituted a point of departure for a process which would continue well into the future," and emphasized that it was "a provisional document that might be improved in the future."³⁷ The most positive statement was made by the representative of Canada (J.A. Beesley), who considered the Declaration as "a first step toward the development of international environmental law."³⁸ In his concluding speech, Mr. Strong stated: "What many sceptics thought would only be a rhetorical statement has become a highly significant document reflecting community of interest among nations regardless of politics, ideologies or economic status."³⁹

The decisions of the Stockholm Conference were submitted to the General Assembly of the United Nations, which referred the matter to its Second Committee. The debate was opened by Mr. Strong who,

35. U.N. Doc. A/CONF.48/14, at 113-19, and Annex II (1972).

36. *Id.* at 113. The USSR and other Eastern European countries boycotted the Conference to protest the exclusion of East Germany.

37. *Id.* at 116.

38. *Id.* at 115; U.N. Press Release IIE/S/79, at 3 (1972).

39. *Id.* at 5.

even more forcefully than at Stockholm, hailed the Declaration as a major achievement. He noted that:

It is the first acknowledgement by the community of nations of new principles of behaviour and responsibility which must govern their relationship in the environmental era. And it provides an indispensable basis for the establishment and elaboration of new codes of international law and conduct which will be required to give effect to the principles set out in the Declaration.⁴⁰

The representative of Kenya supported the Declaration's 16 principles, "for they were 'common convictions' which reinforced the Principles and Purposes of the Charter of the United Nations."⁴¹ The representative of Yugoslavia felt that the Declaration, despite its shortcomings, "was a well-balanced document, represented a moral and political commitment and provided a basis for launching joint international action." He also expressed the hope that the Declaration "would also stimulate countries to adopt a more positive approach to environmental problems."⁴² In a similar spirit, the representative of Ghana was hopeful that "the international community would regard itself as committed by the Declaration to resolve the problems of the planet," and noted the link in the Declaration between development and environment, which was of vital importance to the third world.⁴³

The representative of China pointed out that the Declaration was "a marked improvement on the original draft and reflected some of the reasonable demands of the developing countries," but his delegation continued to have reservations with regard to some of the principles it embodied.⁴⁴ The representative of Chile considered that the text of the Declaration "lacked ideological balance . . . and should be revised," as the United Nations should not attach "special priorities to a problem like that of the human environment, which was important only to a limited number of States."⁴⁵ The Soviet representative, while complaining about the exclusion of the German Democratic Republic from the Stockholm Conference, and though his delegation rejected various decisions of the Conference, stated that in principle his delegation was "not opposed to the current session of the General Assembly taking note of the Declaration." He emphasized, however, that this

40. Statement by Maurice P. Strong . . . before the Second Committee of the General Assembly . . . , 19 Oct. 1972, at 2-3 (mimeo.) (1972).

41. U.N. Doc. A/C.2/SR.1469, at 6 (prov. ed. 1972).

42. U.N. Doc. A/C.2/SR.1470, at 3 (prov. ed. 1972).

43. U.N. Doc. A/C.2/SR.1471, at 4 (prov. ed. 1972).

44. U.N. Doc. A/C.2/SR.1472, at 16 (prov. ed. 1972).

45. U.N. Doc. A/C.2/SR.1473, at 16 (prov. ed. 1972).

"did not imply agreement with all its provisions."⁴⁶ The representative of South Africa announced that his delegation could not accept the Declaration as it contained an unwarranted reference to South Africa's internal policies with respect to apartheid, and claimed that the Declaration could not be described as having been unanimously adopted.⁴⁷

After this discussion, the Committee adopted a widely sponsored draft resolution in which the General Assembly was asked to note with satisfaction the report of the Stockholm Conference, and to draw the attention of governments and of the newly established Governing Council for Environmental Programmes to the Declaration. This draft resolution was adopted by 103 votes to none, with 12 abstentions (the Soviet bloc and South Africa).⁴⁸ The plenary session of the General Assembly adopted this text on December 15, 1972, as Resolution 2994, by 112 votes to none, with 10 abstentions.⁴⁹ The

46. U.N. Doc. A/C.2/SR.1470, at 12 (prov. ed. 1972).

In its only contribution to the preparation of the Declaration, its reply to the questionnaire circulated by the Secretary-General, the Soviet Union made, *inter alia*, the following points:

[T]he Declaration might recommend general principles for the formulation of State policies and the main trends of action by international organizations in connection with the problem of the environment, emphasizing the importance of international co-operation on a bilateral, regional and world basis in order to solve this problem.

[T]he Declaration should be a relatively brief document, suitable for distribution through the mass media and readily accessible to the general public.

[T]he Declaration obviously should not include any provisions concerning relations between a State and its citizens or between individual citizens. These relations are defined by national legislation, as is consonant with the sovereign right of each State.

The Declaration should not over-dramatize the problem of the environment.

[The Declaration should state] that the causes of impairment of the environment and the gravity of the problem differ from country to country and that this depends on the manner and degree of socio-economic development.

[T]he Declaration should be universal in character [and the following wording should be inserted in it]: "In accordance with the spirit of the Charter of the United Nations, all States concerned have pledged themselves to take individual or collective action for the achievement of a solution to the problem of the environment."

In order to make the Declaration reflect the relationship, which is of special interest to the developing countries, between the problem of the environment and the socio-economic problems of development, the text of the Declaration might usefully point out that the solution of these problems would be substantially assisted by State planning of the extraction and utilization of natural resources.

The Declaration should embody general principles which can be recommended to Governments as guidelines for individual and collective action to improve the environment. Among these it is especially important to emphasize the principle of the inalienable sovereignty of States over their natural resources.

U.N. Doc. A/CONF.49/PC/WG.1/CRP.4/Add.2, at 4-6 (1971).

47. U.N. Doc. A/C.2/SR.1470, at 4 (prov. ed. 1972).

48. U.N. Doc. A/CONF.49/PC/WG.1/CRP.4/Add.2, at 4 (1971).

General Assembly also dealt with several other resolutions which bear on the interpretation of the Declaration; they will be considered in appropriate places in the next part of this essay. The Declaration did not really come through the Assembly unscathed, but the text itself was not tampered with in the Assembly as all agreed that it would be too dangerous to upset the fragile balance reached at Stockholm. It remains to be seen how the Declaration will survive in practice and what use will be made of it by governments and the environmentalists.

COMMENTS ON THE DECLARATION⁵⁰

The Declaration consists of a preamble and a set of principles. As in many other international documents, the Preamble is an important part of the document and the principles need to be considered in light of it. Consequently, the issues raised by the Preamble will be considered here first, paragraph by paragraph.

Declaration of the United Nations Conference on the Human Environment

The United Nations Conference on the Human Environment,
Having met at Stockholm from 5 to 16 June 1972,
Having considered the need for a common outlook and for common
principles to inspire and guide the peoples of the world in
the preservation and enhancement of the human environment,

Comment. As noted in the previous section, the object of the Declaration is to provide both inspiration and guidelines for the governments and peoples of the world. From the beginning some of the draftsmen tried to prepare a Declaration primarily inspirational, informative, and educational in character, designed to stimulate public concern over a few selected issues, thus leading indirectly to the required political action. Others claimed that, without losing its inspirational character, the Declaration should provide specific guidelines for individual, national, and international action. It was argued that the first approach demands a fairly concise text which could be easily disseminated by mass media and could also serve as a convenient instrument for education. The second approach would require, on the

⁵⁰ In the preparation of this comment, the author relied on the original questionnaire of the Secretary-General, the replies of various governments, and the drafts and the deliberations of the Working Group, the Preparatory Committee, and the Stockholm Conference. As most of these documents have not been published, it proved possible to provide detailed references only in some instances.

other hand, a more elaborate statement, couched in a legalistic language, with consequent loss of public appeal. The compromise was to attempt to achieve both goals through the device of combining a more literate preamble with a more legalistic set of principles. Neither goal was really achieved. The Preamble has all the marks of a committee draft, loaded with favorite phrases of various members, while the principles are not very legalistic, with a few exceptions such as Principles 1, 7, and 21. The final dividing line seems instead to be between a description of the present sad state of affairs and hopeful guidelines for better behavior in the future. It is in this spirit that the introduction to the Declaration speaks of "the need for a common outlook and for common principles to inspire and guide the peoples of the world in the preservation and enhancement of the human environment."

The other issue which had to be resolved before detailed drafting could begin related to the addressees of the Declaration. Should it be addressed to the governments of the world, to individuals, or to the world's peoples? Should it take man as its measure and speak of his rights and duties, or should it in a traditional fashion deal only with the governments, their shortcomings, their responsibilities, and their rights? While paragraph 7 of the Preamble deals with all levels—individuals, organizations, local and national governments, and international institutions—the introductory phrase of the Declaration, inspired by a similar phrase at the beginning of the Charter of the United Nations, is addressed to "the peoples of the world." Unlike the Constitution of the United States, which opens with the single "people," the Charter and the Declaration recognize the pluralistic nature of the present world society and use the plural "peoples." Even in the face of the dire peril which the Declaration loudly proclaims, it proved too difficult to accept the vision of the unity of mankind, of one people single and indivisible, embarked on a common journey toward a better future. The founders of the United States, at the very moment when the country was falling apart, dared to use the magic, unifying word "people"; the draftsmen of the Declaration, in an allegedly more realistic spirit, compromised on "peoples," certainly an improvement on "countries," "nations," or "governments."

Proclaims that—

1. Man is both creature and moulder of his environment, which gives him physical sustenance and affords him the opportunity

for intellectual, moral, social and spiritual growth. In the long and tortuous evolution of the human race on this planet a stage has been reached when, through the rapid acceleration of science and technology, man has acquired the power to transform his environment in countless ways and on an unprecedented scale. Both aspects of man's environment, the natural and the man-made, are essential to his well-being and to the enjoyment of basic human rights — even the right to life itself.

Comment. This convoluted paragraph combines three staccato phrases of the first draft of the Working Group, which made the following points:

Man is the nucleus of all efforts to preserve and enhance the environment;
 Man's life is affected by his environment which in turn is affected by his activities;
 The maintenance of a safe, healthy and wholesome environment is indispensable to man's well-being and to the full enjoyment of his basic human rights, including the right to life itself.³¹

People started tinkering with these phrases immediately, some trying to get rid of the reference to "the right to life itself," others trying to bring into the forefront of the document the relationship between environment and development by adding at the end of the third sentence the words "and the fruits of economic and social development."³²

Rejecting the "artificial and disjointed pattern" of the first preamble, the United States suggested rewriting it "in a connected narrative form — a series of paragraphs in which the reader can grasp not only

31. U.N. Doc. A/CONF.48/PC.12, Annex I, at 1 (1971). Compare this draft with an earlier, more elaborate Canadian draft which would have started the Declaration as follows:

Whereas there is a fundamental human need for an environment which permits the fullest enjoyment of basic human rights as enumerated in the Universal Declaration of Human Rights including the right to life;

And whereas human life on the planet earth is dependent upon land, air, water and the sun, and upon other forms of life on earth;

And whereas human life is also dependent upon the maintenance of the ecological balance of the biosphere;

And whereas human life is affected by environmental processes and influences which are in turn affected by human activities;

And whereas human beings use the resources of the biosphere for their physical, mental, social and economic development; . . .

U.N. Doc. A/CONF.48/PC/WG.1/CRP.4/Add.2, at 2 (1971).

32. U.N. Doc. A/CONF.48/PC.12, at 1 (1971).

the ideas but the logical connection between them." The U.S. representative explained his idea at some length:

If the traditional UN preamble can be said to have any organizing principle at all, it is simply additive: A plus B plus C. Each idea is self-contained, set off by its inevitable participle—looking like one item in a row of parts waiting for some mechanic to assemble them. That is not the ideal way to convey a complex set of ideas, let alone to make them inspire.

It is important to keep in mind that the subject we have in hand, the human environment, is still a new subject to most of the people of the world whom we hope to reach. It is complex and easy to misunderstand. We cannot expound it clearly and bring it fully to life for a world audience unless our presentation of ideas is not only relevant and true but clear and cogent. If this is well done, and if some talented persons can be found to make the diction suitably euphonious and elevated, our Preamble can serve not only as a convincing introduction to the Principles, but also as an instrument for enlightenment in its own right, addressed to decision-makers, publicists, students, voluntary organizations and public opinion generally: people whose support is rather important to the world environmental effort in years to come. . . .

Let me sum up, and conclude, by suggesting four points as to what the Preamble should and should not be:

1. It should serve not only as a factual and conceptual point of departure for the Fundamental Principles but also as an educational document in its own right.
2. It should set forth basic, relevant facts and conclusions about the world's environmental problems and the need for action at various levels—but without becoming involved in questions of rights and duties which are the province of the operative section.
3. It should be organized in narrative style and thus form a logical and connected whole.
4. It should be inspirational, not merely in the aesthetic sense but in the sense of conveying intellectual and moral conviction.³³

To show how this can be done, he introduced the following draft of the first paragraph (words later omitted are in italics):

1. Man is both creature and creator of his environment. His physical needs are *circumscribed* by age-long evolution in his terrestrial home. But his intellect and his social and moral nature have set him free from time immemorial to transcend and trans-

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form wild nature, and thereby to create for his innumerable progeny a better and more fully human life. Both aspects of man's environment, the natural and the man-made, are essential to his well-being and to the enjoyment of basic human rights—even the right to life itself.⁵⁶

While he had less luck with his other paragraphs, this one escaped the Working Group's gauntlet almost unscathed, and the Working Group sent to the Conference the following text (with changes indicated in italics):

1. Man is both creature and moulder of his environment. His physical needs and capacities are conditioned by age-long evolution in his terrestrial home. But his intellect and his social and moral nature have set him free from time immemorial to transcend and transform wild nature and to build his own society and culture, and thereby create for his progeny a better and more fully human life. Both aspects of man's environment, the natural and the man-made, are essential to his well-being and to the enjoyment of basic human rights—even the right to life itself.⁵⁷

The beginning and the end of the draft survived the Conference, but the in-between section was given a different twist from that originally intended. The final text points out more clearly the relationship between man and his environment, the mutual interdependence, and the reciprocal influences both for better and for worse. At the same time, the final text refuses to credit the natural processes of evolution with having developed man's physical needs and capacities, and simply notes that the environment has given man not only physical sustenance but also afforded him the opportunity for intellectual, moral, social, and spiritual growth. This is but a pale version of the earlier ringing statement that man's "intellect and his social and moral nature set him free from time immemorial to transcend and transform wild nature and to build his own society and culture." Man's "social and moral nature" gave way to a mere "opportunity for intellectual, moral, social, and spiritual growth," but at the same time the draftsmen got rid of the somewhat incompatible idea in the earlier draft that man's nature was not only social and moral but also wild, and needed to be transcended and transformed. Doubtful animalistic theories of human nature were thus replaced by a more sociological approach, giving credit more to the conditioning

⁵⁶ *Id.* at 9.

⁵⁷ U.N. Doc. A/CONF.40/4, Annex, at 1 (1972).

effect of the environment and the new opportunities provided man by improvements in the environment, rather than to a victory of Dr. Jekyll over Mr. Hyde in the man-beast's breast.

The middle sentence pays proper obeisance to the role played by science and technology in providing mankind with the power to transform the environment on an unprecedented scale. It was lifted from the second paragraph of the earlier draft in order to provide at the very beginning a counterpoise to the cries of some young environmentalists who have blamed science and technology for our present predicament. The draftsmen put instead in the forefront the notion that without science and technology man would not have been able to master the environment and, as pointed out in the final sentence, might have even forfeited his life in the struggle against cruel nature.

The final phrase relates the issue of the environment to another great problem facing the United Nations—the promotion of universal respect for, and observance of, human rights and fundamental freedoms.⁵⁸ Proper environment, in both its natural and man-made aspects, is deemed essential to the enjoyment of human rights,⁵⁹ and the right to life itself depends on the preservation and protection of the environment. While some early drafts referred expressly to the Universal Declaration of Human Rights⁶⁰ as the source for the recognition of the right to life, most of the later drafts found such reference unnecessary or undesirable. Principle 1 (discussed below) interestingly enough speaks of other fundamental rights, but does not mention the right to life. But there is no question that man's life and his environment are interdependent. If the environment is damaged beyond its recuperative power, man may not survive on earth. On the other hand, if man decides to exterminate his brethren, in the process he may destroy the whole ecological system as well. In an all-out nuclear war, both mankind and the remainder of life on earth may perish completely, and the earth may become as dead as the moon.

2. The protection and improvement of the human environment is a major issue which affects the well-being of peoples and economic development throughout the world; it is the urgent desire

⁵⁶ U.N. CHARTER, art. 55(c).

⁵⁷ G.A. Res. 2398, Dec. 3, 1968, expressed concern about the effects of environmental deterioration "on the condition of man, his physical, mental and social well-being, his dignity and his enjoyment of basic human rights, in developing as well as developed countries." 23 U.N. GAOR, Supp. 18 (Doc. A/7218) at 2 (1969).

⁵⁸ Approved by G.A. Res. 217A, Dec. 10, 1948, 3 U.N. GAOR, Part I, Resolutions (Doc. A/810) at 71 (1948). Article 3 provides that "Everyone has the right to life, liberty and the security of person."

of the peoples of the whole world and the duty of all Governments.

Comment. This paragraph is based on a Chinese proposal, which read as follows:

The conservation and improvement of the human environment is a major issue which affects the livelihood and economic development of the people throughout the world as well as an urgent wish of the peoples of the whole world and the bounden duty of all governments.⁵⁹

Except for minor drafting changes, the Chinese text was accepted by the Conference. It links the improvement of the environment not only with the well-being of peoples but also with economic development. In a rather indirect way the text proclaims the legal obligation of all governments to protect the environment. The essence of the paragraph could be paraphrased as follows: "The protection and improvement of the human environment is the duty of all governments." While suggestions that such an obligation be included in the Declaration were made several times in the early drafting stages,⁶⁰ states were rather reluctant to accept such a broad obligation of an indeterminate scope. The Chinese delegation was somehow able to persuade the other members of the Working Group not only to accept this duty but also to put it most appropriately in the forefront of the Declaration. This was a striking accomplishment, though the language is more obscure than might have been desired, considering the importance of the principle involved.

3. Man has constantly to sum up experience and go on discovering, inventing, creating and advancing. In our time, man's capability to transform his surroundings, used wisely, can bring to all peoples the benefits of development and the opportunity to enhance the quality of life. Wrongly or heedlessly applied, the same power can do incalculable harm to human beings and the human environment. We see around us growing evidence of

59. U.N. Doc. A/CONF.48/WG.1/CRP.31 (1972). In a similar vein, Iran suggested that the Conference recognize "the main goal of development, in its widest and noblest sense, to be providing man with his basic rights as well as enabling him to enjoy welfare and prosperity. . . ." U.N. Doc. A/CONF.48/WG.1/CRP.5 (1972).

60. Some replies to the questionnaire of the Secretary-General suggested, for instance, that states have the duty to carefully husband natural resources and to maintain and enhance the quality of the environment for present and future generations. For the replies of Colombia, Denmark, the Holy See, Italy, the Netherlands, . . .

man-made harm in many regions of the earth: dangerous levels of pollution in water, air, earth and living beings; major and undesirable disturbances to the ecological balance of the biosphere; destruction and depletion of irreplaceable resources; and gross deficiencies harmful to the physical, mental and social health of man, in the man-made environment, particularly in the living and working environment.

Comment. This paragraph is traceable to the original resolution of the General Assembly relating to the convening of the Stockholm Conference, in which the General Assembly noted that "the relationship between man and his environment is undergoing profound changes in the wake of modern scientific and technological developments"; that "these developments, while offering unprecedented opportunities to change and shape the environment of man to meet his needs and aspirations, also involve grave dangers if not properly controlled"; and that "the continuing and accelerating impairment of the quality of the human environment [is] caused by such factors as air and water pollution, erosion and other forms of soil deterioration, waste, noise and the secondary effects of biocides, which are accentuated by rapidly increasing population and accelerating urbanization."⁶¹ It was first formulated by the United States as follows:

In our time man has acquired, through the accelerating growth of science and technology, the power to transform his surroundings in countless ways and on an unheard-of scale. Used wisely, this power can bring to all peoples the benefits of development and the opportunity to enhance the quality of life. Wrongly or heedlessly applied, the same power can do incalculable harm to the human environment. We see around us growing evidence of this man-made harm in many regions of the earth: dangerous levels of pollution in water, air, earth and the human body; major disturbances to the ecological balance of the biosphere; destruction and depletion of irreplaceable living and mineral resources; and gross deficiencies in the man-made environment of human settlements.⁶²

A slight revision of this paragraph, prepared jointly by Brazil, Costa Rica, Egypt, Yugoslavia, and Zambia,⁶³ was forwarded to the Stockholm Conference in the following form:

Man has constantly to sum up experience and go on discovering,

inventing, creating and advancing. In our time he has acquired, through the accelerating advancement of science and technology, the power to transform his surroundings in countless ways and on an unheard of scale. Used wisely, this power can bring to all peoples the benefits of development and the opportunity to enhance the quality of life. Wrongly or heedlessly applied, the same power can do incalculable harm to the human environment. We see around us growing evidence of man-made harm in many regions of the earth: dangerous levels of pollution in water, air, earth and living beings; major and undesirable disturbances to the ecological balance of the biosphere; destruction and depletion of irreplaceable resources; and gross deficiencies in the man-made environment of human settlements.⁶³

At Stockholm, the new Working Group accepted a Finnish amendment broadening the last phrase of the paragraph, and replacing the reference to "human settlements" with more general reference to "living and working environment."⁶⁴ It is not enough to try to improve the places where man lives; it is important to ensure that he works in adequate surroundings.

The triumphant note in the first part of this paragraph is followed by the discordant note in the second half. Mankind is capable of great progress, but has used its power not only for good but also increasingly for evil. Instead of bringing to all peoples the benefits of development, man has created deficiencies in the environment which are actually harmful to his physical and mental health. While in war in the past the victor gained some benefits from victory, in the modern war which man wages against the environment in the many ways noted in this paragraph, man himself is the principal victim.⁶⁵

63. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.3/Rev.4 (1972). This document contains joint proposals of an ad hoc group of developing countries from various continents which assumed leadership in the Working Group.

64. U.N. Doc. A/CONF.48/4, Annex, at 1 (1972).

65. U.N. Doc. A/CONF.48/WG.1/CRP.9 (1972). The need to refer specifically to the "working environment" was suggested previously by the International Labor Organization. U.N. Doc. A/CONF.48/PC/WG.1/CRP.7, at 2 (1971).

66. This point was put strongly in an Indian proposal, which also provided the basis for a part of the next paragraph of the Declaration. This proposal was to insert into the Preamble the following paragraphs:

Since man first discovered that he could use nature for his own purposes, he has been interfering with his environment. Man is a part of nature and only one of the many species who inhabit the earth, but he has treated it as his colony to exploit for immediate gain with little thought for the future. The scale of human interference with the rhythms of nature has already reached alarming proportions, and its adverse effects are being increasingly felt in the technologically advanced

4. In the developing countries most of the environmental problems are caused by under-development. Millions continue to live far below the minimum levels required for a decent human existence, deprived of adequate food and clothing, shelter and education, health and sanitation. Therefore, the developing countries must direct their efforts to development, bearing in mind their priorities and the need to safeguard and improve the environment. For the same purpose, the industrialized countries should make efforts to reduce the gap between themselves and the developing countries. In the industrialized countries, environmental problems are generally related to industrialization and technological development.

Comment. While some elements of this paragraph may be found in various proposals before the Stockholm Conference, it was derived primarily from the following Chinese proposal:

At the present stage, the world environmental issue falls into two categories. In the developing countries, most of their environmental problems are caused by under-development which prevented them from taking energetic measures to improve the environment. Therefore, the developing countries must mainly direct their efforts to develop their national economy, build their modern industry and modern agriculture, safeguard their state sovereignty and independence and under this prerequisite, to adequately solve their own environmental problems. As to the few highly industrialized countries, where pollutions are most serious and even endanger the environment of neighbouring countries and that of the world, the speedy solution of this problem has become the strong desire of the people of the countries concerned and the world as a whole.⁶⁷

Some important changes were made, however, in the Chinese draft. While the emphasis on development was retained in the final text, it was softened to some extent, and the confusing reference to sovereignty

countries. While precious resources are being diverted to stockpile weapons capable of annihilating many times over not only the human race but all forms of life on this planet, millions continue to live well below the minimum levels required for a decent human existence. Deprived of adequate food and clothing, shelter and education, health and sanitation, this section of humanity mainly in the developing countries is a monument to the inadequacy of the present international mechanisms to ensure the welfare of the human race in global terms. The very existence of such conditions is a major factor in the degradation of the human environment.

U.N. Doc. A/CONF.48/CRP.9 (1972).

67. U.N. Doc. A/CONF.48/WG.1/CRP.23 (1972). The second sentence of paragraph 4 of the Declaration comes from the Indian proposal quoted in the previous footnote.

and independence was omitted. This softening was balanced by an increased emphasis on development in the sentences relating to the industrialized countries. Instead of urging them to provide a speedy solution of the pollution problems at home, the new text stresses the need to help the developing countries to reduce the gap between them and the developed countries. The Chinese idea of self-help has been thus replaced by the notion that the closing of the gap should be primarily accomplished through efforts of the industrialized countries.

5. The natural growth of population continuously presents problems on the preservation of the environment, and adequate policies and measures should be adopted, as appropriate, to face these problems. Of all things in the world, people are the most precious. It is the people that propel social progress, create social wealth, develop science and technology and, through their hard work, continuously transform the human environment. Along with social progress and the advance of production, science and technology, the capability of man to improve the environment increases with each passing day.

Comment. In its first draft of 1971, the United States had included the statement that "excessive population growth can defeat man's efforts to preserve the earth's environment."⁶⁸ This was further elaborated in the 1972 draft:

68. U.N. Doc. A/CONF.48/PC/WG.1/CRP.4, at 64 (1971). This paragraph was included in the first draft of the Working Group in the following form: "Excessive population growth could defeat man's efforts to preserve and enhance his environment." U.N. Doc. A/CONF.48/PC.12, Annex I, at 1 (1971). The report of the Working Group contained the following comments on this proposal:

The delegations of Brazil, Czechoslovakia and the USSR stated that the problem of population manifests itself differently in various regions and countries of the world. While in some countries this problem takes the form of so-called excessive population growth, in other countries, on the contrary, there is a need to increase the birth rate. In the opinion of these delegations, the problem of population and the establishment of policies in this field should be defined only by the Governments of the countries concerned. Accordingly, the problem of population as stated in the present document is not universal, and consequently it should not be included in the draft declaration.

The delegation of Argentina stated its serious opposition to the sentence as drafted since in its opinion it did not reflect the world situation but only the problems of certain regions of the world. The delegation of Argentina initially considered that this principle should be forwarded to the Preparatory Committee in brackets. However, in order to reach a generally acceptable formulation, the delegation of Argentina proposed the inclusion of the words "in certain regions" between the words "growth" and "could" and also the substitution of the word "imperial" for the word "defeat" so that the sentence would read as follows: "Excessive population growth, in certain regions, could imperil man's efforts to preserve and enhance the environment. . . ."

Several other delegations, for instance those of C. . . .

In our time also, the growth of population in many areas, through both migration and unprecedented natural increase, has accelerated to rates which could frustrate all efforts to conquer poverty and underdevelopment and to maintain a decent human environment.⁶⁹

The Working Group also had before it a proposal by Brazil, Egypt, and Yugoslavia referring to "the environmental strains which, in some regions, arise from excessive population concentrations."⁷⁰ This proposal led to a joint draft by Brazil, Costa Rica, Egypt, Yugoslavia, and Zambia,⁷¹ which was approved provisionally by the Working Group and transmitted to the Stockholm Conference in the following form:

In our time also, the growth of population in certain areas, through both migration and unprecedented natural increase, has accelerated to rates which could frustrate all efforts to conquer poverty and underdevelopment and to maintain a decent human environment, whereas other areas have not yet reached population densities conducive to economic efficiency and the high productivity that will permit the rapid increase of standards of living.⁷²

A different twist was given to this paragraph by the Chinese proposal on the subject which read:

The natural growth of population continuously presents new problems on the preservation of environment. But provided the governments genuinely take the interest of the people to heart and adopt correct policy and measures, these problems can be solved. Of all things in the world, people are the most precious. It is the people that propel social progress, create social wealth, develop science and technology and through their hard work, continuously transform the human environment. Along with social progress

population growth could not be disregarded in the context of protecting and enhancing the environment and advocated retention of this preambular paragraph. The delegation of the United States further stated that regardless of their population density, all countries had to give due regard to population growth.

Id., Annex II, at 4-5.

69. U.S. Press Release USUN-2(72) at 3 (1972).

70. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.3/Rev.1, at 1 (1972).

71. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.3/Rev.4, at 2 (1972).

72. U.N. Doc. A/CONF.48/4, Annex, at 1 (1972). A slightly revised version of this draft was presented at Stockholm by Egypt and Libya:

In our time also the growth of population in some areas, through both migration and natural increase, has accelerated to rates which may hamper efforts to conquer poverty and under-development, whereas some other areas have not yet reached

and the advance of production, science and technology, the capability of man to improve the environment increases with each passing day. This has opened up a broad vista for the enhancement of environment quality and the creation of a happy life.⁷⁴

The final draft closely follows the Chinese text, with a few minor amendments. Instead of the previous negative approach to population growth, the new draft emphasizes the fact that of all things in the world, people are the most valuable. While population growth may cause some problems, adequate policies can provide solution. As the Chinese draft pointed out, what is needed is for governments to take the interests of the people genuinely to heart and to open broad vistas to a happy life.

6. A point has been reached in history when we must shape our actions throughout the world with a more prudent care for their environmental consequence. Through ignorance or indifference we can do massive and irreversible harm to the earthly environment on which our life and well-being depend. Conversely, through fuller knowledge and wiser action, we can achieve for ourselves and our posterity a better life in an environment more in keeping with human needs and hopes. There are broad vistas for the enhancement of environmental quality and the creation of a good life. What is needed is an enthusiastic but calm state of mind and intense but orderly work. For the purpose of attaining freedom in the world of nature, man must use knowledge to build, in collaboration with nature, a better environment. To defend and improve the human environment for present and future generations has become an imperative goal for mankind—a goal to be pursued together with, and in harmony with, the established and fundamental goals of peace and of world-wide economic and social development.

Comment. This text constitutes an expansion of a United States draft which read as follows:

Thus a point has been reached in history when we must shape our actions throughout the world with a more prudent care for their environmental consequences. Through ignorance or indifference we can do massive and irreversible harm to the earthly environment on which our life and well-being depend. Conversely we can, through fuller knowledge and wiser action, achieve for ourselves and our posterity a better life in an environment

73. U.N. Doc. A/CONF.48/WG.1/CRP.23, at 2 (1972).

more in keeping with human needs and hopes. To end and enhance the human environment for present and future generations has become an imperative goal for mankind—a goal to be pursued together with, and in harmony with, the established and fundamental goals of peace and of world-wide economic and social development.⁷⁵

Two of the three additional sentences in the middle of the paragraph were taken from a joint draft of Brazil, Costa Rica, Egypt, Yugoslavia, and Zambia;⁷⁶ the phrases about the "broad vistas" and the "better life" seem to have come from the Chinese proposal for the previous paragraph. Apart from that addition, only minor drafting changes were made at the Stockholm Conference.

This paragraph continues the upward momentum of the previous paragraph in a slightly repetitious manner. While paragraph 5 spoke of "hard work", paragraph 6 refers to "intense but orderly work." There are references here to both "better life" and "good life." Environmentalists are commended to combine enthusiasm with a calm state of mind. In paragraph 2, the protection and improvement of the human environment was considered as "the urgent desire of the peoples of the world"; in paragraph 6, the imperative goal for mankind is to defend and improve the human environment for present and future generations.

This paragraph puts on a par the three basic goals of mankind—protection of the human environment, peace, and worldwide economic and social development. This triad had been put together in the original United States proposal, in which this mention of peace was preceded by a paragraph referring to the fact that "immense resources continue to be consumed in armaments and armed conflict, wasting and threatening still further the human environment."⁷⁷ Though this paragraph, combining the ideas of wasting resources on armaments and of armed conflicts threatening the human environment, was forwarded by the Working Group to the Stockholm Conference,⁷⁸ it was not included in the Declaration. This was probably due to the

74. U.S. Press Release USUN-2(72), para. 5, at 3 (1972).

75. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.3/Rev. 4, at 2 (1972).

76. U.S. Press Release USUN-2(72), para. 4, at 3 (1972).

77. U.N. Doc. A/CONF.48/4, Annex I, para. 4, at 2 (1972). A parallel proposal presented to the Stockholm Conference by Egypt and Libya read as follows:

Meanwhile, while precious resources continue to be directed to stockpile weapons capable of annihilating not only the human race but all forms of life on this planet, millions continue to live well below the minimum levels required for a decent human existence.

U.N. Doc. A/CONF.48/WG.1/CRP.21 (1972).

confusion on the subject engendered by a Chinese proposal which would have replaced this paragraph by one condemning imperialism as the "root-cause of modern wars."⁷⁸ Between the old proposal which some considered too weak and the Chinese one which some considered too one-sided, the whole idea was dropped as too controversial.

7. To achieve this environmental goal will demand the acceptance of responsibility by citizens and communities and by enterprises and institutions at every level, all sharing equitably in common efforts. Individuals in all walks of life as well as organizations in many fields, by their values and the sum of their actions, will shape the world environment of the future. Local and national governments will bear the greatest burden for large-scale environmental policy and action within their jurisdictions. International co-operation is also needed in order to raise resources to support the developing countries in carrying out their responsibilities in this field. A growing class of environmental problems, because they are regional or global in extent or because they affect the common international realm, will require extensive co-operation among nations and action by international organizations in the common interest. The Conference calls upon Governments and peoples to exert common efforts for the preservation and improvement of the human environment, for the benefit of all the people and for their posterity.

Comment. This paragraph of the Preamble may be traced to a suggestion by the Netherlands that the Preamble should elaborate on the three-level relationship of "man—State—international community." It explained this suggestion as follows:

Man, comes first, his dignity and his equal and inalienable rights; man, whoever and wherever he may be, is at the centre of all our efforts (see the Universal Declaration of Human Rights). It could also be pointed out that man has not only rights but also responsibilities towards his fellow-men and the community (see article 29 of the Universal Declaration). The preamble would then turn its attention to the State, which has a duty towards people under

78. The Chinese proposal would have inserted here the following language: Imperialism is the root-cause of modern wars. The imperialists launch aggressive wars and use the greatest achievement of modern technology to barbarously massacre millions of people, destroy culture and civilization created by mankind in the course of thousands of years, ruin the environment for human existence and bring about unprecedented catastrophe to mankind. All the countries and peoples who cherish peace and uphold justice should unite, condemn the crimes of aggression committed by imperialism and new and old colonialism, check aggressive wars, safeguard international peace and protect the human environment.

its direct responsibility but also the duty to work in cooperation with other States in order that all their obligations to mankind to the fullest possible extent. This is also the underlying principle of Article 56 of the United Nations Charter: "All members pledge themselves to take joint and separate action, etc."). This obligation of States to cooperate with one another would lead to the third dimension, namely that of the *international community*. By the Charter of the United Nations the international community, as embodied in the United Nations Organization, has undertaken to promote certain economic, social and humanitarian purposes (Article 55 of the United Nations Charter). In relation to this it may be stated that the commitment made by the international community should not only be promotional in character, but should also provide for devices of review and re-appraisal once concrete standards and programmes have been formulated for the maintenance and improvement of the human environment. It would also seem important to underline the global character in the preamble. Although the problems presented by the environment can vary from country to country they are becoming of increasing concern to all members of the international community regardless of their geographical, economic and social situation.⁷⁹

The Netherlands Government suggested further that the preamble should conclude:

[W]ith an appeal to all *organs of society, both national and international*, to the end that they, keeping the Declaration in mind, should strive for the realization of the principles and guidelines set out in the Declaration (see as an example the last paragraph of the preamble of the Universal Declaration of Human Rights). A conclusion of the preamble on these lines would bring out that the Declaration is not only based on the three-level legal framework of "man—State—international community," but rises above what is essentially a practical juridical construction in addressing a general appeal to all organs of society and to mankind as a whole in the interests of the well-being of future generations.⁸⁰

This proposal was given concrete form by the United States, which presented the following draft:

To achieve this environmental goal will demand the acceptance of responsibility by individuals and communities at every level, all sharing equitably in common efforts. Citizens and families, teach-

ers and students, scientists, technicians, leaders and voluntary organizations in many fields, by their values and the sum of their actions, will shape the world environment of the future. Local and national governments will bear the greatest burden of large-scale environmental policy and action within their jurisdictions. A growing class of environmental problems, because they are regional or global in extent or because they affect the international realm, will require extensive cooperation among nations and action by international organizations in the common interest.⁸¹

Some minor but not unimportant changes were made in this draft by the amended text prepared jointly by Brazil, Costa Rica, Egypt, Yugoslavia, and Zambia,⁸² which was forwarded by the Working Group to the Stockholm Conference in a slightly revised form. The Working Group text read as follows (changes from the United States draft being indicated in italics):

To achieve this environmental goal will demand the acceptance of responsibility by *citizens and communities and by enterprises and institutions at every level, all sharing equitably in common efforts. Individuals in all walks of life as well as organizations in many fields, by their values and the sum of their actions, will shape the world environment of the future. Local and national governments will bear the greatest burden for large-scale environmental policy and action within their jurisdictions. A growing class of environmental problems, because they are regional or global in extent or because they affect the common international realm, will require extensive co-operation among nations and action by international organizations in the common interest.*⁸³

The sentence in the middle of the paragraph, relating to international cooperation in raising resources to support the developing countries in carrying out their responsibilities for achieving the environmental goal, was added at Stockholm as a result of a proposal by Egypt and Libya.⁸⁴ The final phrase of the paragraph, calling for common efforts, originated in a Chinese proposal which, in addition, contained some striking language, imbued with optimism about the future of mankind "full of hope and filled with infinite brilliance."⁸⁵

81. U.S. Press Release USUN-1(72) at 4 (1972).

82. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.3/Rev. 4, at 2 (1972).

83. U.N. Doc. A/CONF.48/4, Annex, at 2 (1972).

84. U.N. Doc. A/CONF.48/WG.1/CRP.21 (1972).

85. The Chinese proposal for the final paragraph of the Preamble read as follows: Man has unerringly to sum up experience and go on discovering, inventing, creating and advancing. In the protracted struggle, mankind is sure to win social progress, scientific and technical development and will also certainly attain a good environ-

Departing from the "peoples" of the prefatory phrase, the Preamble ends with a reference not only to "Governments and peoples" but also to "all the people"—a step in the right direction. The last paragraph of the Preamble also makes clear that responsibility for achieving the environmental goals specified in the Declaration lies in the hands of both governments and of individuals and organizations. Enterprises, institutions "at every level," local governments, and international organizations are expressly mentioned among the addressees of the Declaration. While it is recognized that the greatest burden must be born by the local and national governments, who are primarily responsible for environmental policy and action within their jurisdiction, the Declaration assigned at least three areas to international cooperation. In the first place, international cooperation will be necessary to provide the additional resources required by the developing countries for meaningful environmental action. Secondly, there is a growing class of environmental problems which are regional or global in extent, and can be dealt with only through regional or global cooperation. Finally, the Declaration points out that certain environmental problems affect "the common international realm," which seems to be a variation of the idea of the "common heritage of mankind" accepted by the General Assembly in connection with the seabed and the ocean floor.⁸⁶ Only common institutions can properly protect common interests. The Stockholm Conference created these institutions, thus providing the necessary framework for the achievement of the environmental goals proclaimed in the preamble to the Declaration.

II

PRINCIPLES

States the common conviction that:

Principle I

Man has the fundamental right to freedom, equality and ade-

ment [sic] for its own existence and development. The future of mankind is full of hope and filled with infinite brilliance. The Conference calls upon the governments and peoples to act positively and exert common efforts for the preservation and improvement of the human environment, for the benefit of the people and for their posterity.

U.N. Doc. A/CONF.48/WG.1/CRP.23, at 2 (1972).

86. Declaration of Principles Governing the Seabed and the Ocean Floor, and the Subsoil Thereof, beyond the Limits of National Jurisdiction, G.A. Res. 2749, Dec. 17, 1970, 25 U.N. GAOR, Supp. 28 (Doc. A/8028) at 24 (1971).

quate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations. In this respect, policies promoting or perpetuating apartheid, racial segregation, discrimination, colonial and other forms of oppression and foreign domination stand condemned and must be eliminated.

Comment. While the Working Group of the Preparatory Committee agreed early on the scope and style of the Preamble, its members held rather divergent views with respect to the proposed statement of principles. Should the principles be limited to Interstate relations, or should they deal also with relations between individuals and states, or even between individuals themselves? Should they spell out the rights and duties of man, states, and the international community, respectively? Should they stress environmental rights or should they emphasize responsibilities with regard to the protection and enhancement of the human environment? Should the principles contain guidelines for action or legal obligations? These were some of the questions presented in the questionnaire circulated by the Secretary-General,⁸⁷ and he got a bewildering number of replies, which the Working Group somehow condensed into first 17 and later 23 principles.

Some thought it desirable that the Declaration should start with a general affirmation of every human being's "right to a wholesome environment."⁸⁸ They pointed out that this right was already recog-

87. U.N. Doc. A/CONF.48/PC/WG.1/CRP.4, at 3-4 (1971). This document also contains some background notes by the Secretary-General (at 5-14) and the replies of 18 Governments. Later replies are reproduced in the addenda to this document.

88. Replies by Colombia, Denmark, Ethiopia, the Holy See, Panama, Singapore, and the United Arab Republic. *Id.* at 12, 25, 28, 32, 40, 51, 52, 60. On the other hand, the Swiss Government expressed the view that "the recognition of a subjective individual right to the enjoyment of [a sound and healthy] environment is not really compatible with some national legal systems, such as Swiss constitutional law." *Id.* at 57.

It may also be noted that the European Conservation Conference of 1970, in its Declaration on the Management of the Natural Environment of Europe, proposed the preparation of a protocol to the European Convention on Human Rights "guaranteeing the right of every individual to enjoy a healthy and unspoiled environment." It recommended that this protocol should cover "the rights to breathe air and drink water reasonably free from pollution, and the right to freedom from undue noise and other nuisances, and to reasonable access to coast and countryside." Council of Europe, Eur. Consult. Ass., 22d Sess., 1st Part, 3 Docs.; WORKING PAPERS, Doc. No. 2758, at 36-37 (1970). See also *id.*, 24th Sess., 2d Part, TEXTS ADOPTED BY THIS ASSEMBLY, Recommendation 683, at 2-3 (1972), requesting that an ad hoc committee consider "whether the right to an adequate environment should be raised to the level of a human right, and devise an appropriate instrument to protect this new right."

nized by the Universal Declaration of Human Rights⁸⁹ and by the International Covenant of Economic, Social and Cultural Rights.⁹⁰ Accordingly, the United States proposed that:

Every human being has a right to a healthful and safe environment, including air, water and earth, and to food and other material necessities, all of which should be sufficiently free from contamination and other elements which detract from the health or well-being of man.⁹¹

At the first session of the Working Group preliminary agreement was reached on the following phrasology:

Everyone has a fundamental right to a safe, healthy and wholesome environment for the full enjoyment of his basic human rights including the right to favourable physical working conditions and to a standard of living adequate for his health and well-being.⁹²

Immediate objections were raised by the representatives of several specialized agencies. The representative of the World Health Organization suggested the following alternative wording for this principle:

Everyone has a fundamental right to an environment that safeguards the health of present and future generations for the full enjoyment of his basic human rights, including the right to a standard of living adequate for his well-being.⁹³

While the representative of the Food and Agriculture Organization proposed the addition of a reference to "the right to clean food," the representative of the International Labor Organization suggested the substitution of "working environment" for "physical working conditions," as the second phrase was too wide. He considered that the

among its principles the statement that "[e]ach person has a fundamental right to a healthful environment." U.N. Doc. A/CONF.48/PC/WG.1/CRP.4, at 52 (1971).

89. Article 25(1) of the Universal Declaration of Human Rights reads in part as follows:

Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing . . . G.A. Res. 217A, Dec. 10, 1948, 3 U.N. GAOR, Part I, Resolutions (Doc. A/810) at 78 (1948).

90. In article 11 (1) of the International Covenant on Economic, Social and Cultural Rights, States Parties to that Covenant recognize "the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions." Adopted by G.A. Res. 2200, Dec. 16, 1966, 21 U.N. GAOR, Supp. 16 (Doc. A/6316) at 50 (1967).

91. U.N. Doc. A/CONF.48/PC/WG.1/CRP.4, at 65 (1971).

92. U.N. Doc. A/CONF.48/PC.12 Annex I at 1 (1971).

words "working environment" were more appropriate as they included "both occupational safety and health in the traditional sense and also such disciplines as industrial psychology, designed to make the whole environment of work more fully adapted to the physical and psychological needs of man."⁹⁴

At the second session of the Working Group, a new draft was presented jointly by Brazil, Costa Rica, Egypt, Yugoslavia, and Zambia,⁹⁵ and was referred by the Working Group to the Stockholm Conference. It read as follows:

Man has the fundamental right to adequate conditions of life, in an environment of a quality which permits a life of dignity and well-being and bears a solemn responsibility to protect and enhance the environment for future generations.⁹⁶

At the Stockholm Conference, Chile quite reasonably suggested that the environment should be protected for the benefit not only of future generations but also the present one, and the end of the first sentence was changed accordingly.⁹⁷

Greater difficulties were caused by a Tanzanian amendment,⁹⁸ endorsed later by twelve other African states,⁹⁹ which would have added an express reference to the right to life itself, and would have supplemented the text by another sentence denouncing expansionism, apartheid, colonialism, and racism.¹⁰⁰ After some hard bargaining a modified version of the second sentence was inserted in the Declaration, though some countries felt that this was an extraneous matter which should not have been raised. At the end only South Africa made a reservation to this paragraph, contending that the Conference was not competent to include here a principle which "clearly con-

94. *Id.*

95. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.3/Rev.4, at 2 (1972).

96. U.N. Doc. A/CONF.48/4, Annex, at 2 (1972).

97. U.N. Doc. A/CONF.48/WG.1/CRP.10 (1972).

98. U.N. Doc. A/CONF.48/WG.1/CRP.8 (1972).

99. For the 13-state proposal see U.N. Doc. A/CONF.48/WG.1/CRP.20 (1972). The same amendment was incorporated in a joint nine-state proposal. U.N. Doc. A/CONF.48/WG.1/CRP.22 (1972).

100. The 13-state proposal read as follows:

Man has the fundamental right to life itself and therefore to adequate conditions of life, in an environment of a quality which permits a life of dignity and well-being and bears a solemn responsibility to protect and enhance the environment for future generations. In this respect we unequivocally denounce expansionism, disrespect of territorial integrity and crimes committed against mankind by advocates of apartheid, colonial and racist practices which also threaten the human environment.

U.N. Doc. A/CONF.48/WG.1/CRP.20 (1972).

stituted interference in the internal affairs of a Member State, in direct conflict with the Charter of the United Nations."¹⁰¹

In several respects, the final text is not an improvement on the earlier versions. Direct references to the right to life itself and the right to a safe, healthy, and wholesome environment have been omitted, though the former is at least mentioned in the first paragraph of the Preamble. It would have been an important step forward if the right to an adequate environment were put in the forefront of the statement of principles, thus removing the lingering doubts about its existence. The reference to the "fundamental right to . . . adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being" is as close as the Declaration comes to a recognition of this essential right. Perhaps this phrase is meant to convey the existence of the right to an adequate environment, but it would have been much better had the draftsmen of the Declaration stated it more clearly.

Similarly, the reference in some early drafts to "everyone" as the possessor of the right has been replaced by a more generic reference to "man," thus further weakening any parallel to the Universal Declaration of Human Rights which uses the "everyone" language. Is it the individual "man" who is entitled to benefit from the Declaration, or the collective "man," mankind as a whole? While the intention might have been to use the collective approach, the final text seems to have returned to the notion of man as an individual entitled to certain rights, even if these rights had to be phrased in very general terms. It is the individual who can, under the Declaration, claim the right to "freedom, equality, and adequate conditions of life." The first two of these rights he already enjoys under the Universal Declaration, and even the third one, especially as it is phrased here, might be already protected by that Declaration (as was noted in the second paragraph of this comment).

In another parallel with the Universal Declaration (article 29), the Stockholm Declaration balances man's rights with his responsibilities, and exhorts him "to protect and improve the environment for present and future generations."¹⁰²

101. U.N. Doc. A/CONF.48/14, at 117 (1972).

102. Early in the drafting the Danish Government suggested that the "main emphasis should be placed on the responsibilities of the individual and at all levels to protect and improve the quality of human environment." U.N. Doc. A/CONF.48/PC/WG.1/CRP.4, at 29 (1971). For the statements of France, Italy, the Netherlands, and Singapore see *id.* at 33, 44, 48, 52. The first draft of the Working Group contained a separate para. 2, stating that "[e]veryone has a responsibility to protect the environment." U.N. Doc. A/CONF.48/PC.12, Annex 1, at 3 (1971). A United Kingdom proposal would have combined the two paragraphs suggested by the Working

Principle 2

The natural resources of the earth including the air, water, land, flora and fauna and especially representative samples of natural ecosystems must be safeguarded for the benefit of present and future generations through careful planning or management, as appropriate.

Comment. In the Background Notes accompanying his questionnaire, the Secretary-General suggested that the Declaration should refer to the "duty of all nations to carefully husband their natural resources and to hold in trust for present and future generations the air, water, lands, and communities of plants and animals on which all life depends."¹⁰³ This proposal was endorsed by Colombia,¹⁰⁴ which also noted that to achieve this objective "most careful planning and rational management of natural resources is required."¹⁰⁵ In a slightly amended form this proposal was incorporated in the draft prepared by the first session of the Working Group, which read:

States shall carefully husband their natural resources and shall hold in trust for present and future generations the air, water, land and plants and animals on which all life depends.¹⁰⁶

Objections were immediately raised to this text, as some delegations considered that it was "unduly restrictive of the concept of national sovereignty," and that it introduced "an element of discrimination against developing countries which are only now entering upon their own development process."¹⁰⁷ Five developing countries (Brazil, Costa Rica, Egypt, Yugoslavia, and Zambia) then came up with the proposal that the Conference should declare its firm belief in the need "to safeguard the natural resources of the earth, including the air, water, land, flora and fauna, and especially natural ecosystems, through careful planning or management, as appropriate, for the benefit of

Group in the following manner, shifting the responsibility from "everyone" to "mankind":

Mankind bears the solemn responsibility of maintaining an environment in which the safety, health and creative fulfilment of every individual are not hampered by avoidable deficiencies in his working or home environment or by inadequacies in his standard of living.

U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.11 (1972).

103. U.N. Doc. A/CONF.48/PC/WG.1/CRP.4, at 13 (1972).

104. *Id.* at 25.

105. *Id.* at 23.

106. U.N. Doc. A/CONF.48/PC.12, Annex I, at 3 (1972).

present and future generations."¹⁰⁸ The Working Group reformulated this proposal in a more direct form,¹⁰⁹ and with only minor changes this provision was adopted by the Conference.¹¹⁰

The final formulation is more neutral than the original. The emphasis is no longer on a duty of states to husband their resources, but on careful planning and management of earth resources, without specification of the addressee. Similarly, the idea that states hold their resources "in trust" for present and future generations¹¹¹ has been replaced by the vaguer notion of an unspecified somebody safeguarding the resources for "the benefit" of these generations.

Nevertheless, it is important that the Stockholm Conference followed here the example set by the United Nations Declaration on the Sea-Bed which specified that the exploration of the area subject to that Declaration and the exploitation of its resources shall be carried out "for the benefit of mankind as a whole."¹¹² Similarly, the natural resources listed in Principle 2 of the Stockholm Declaration are to be safeguarded for the benefit of mankind.

Principle 3

The capacity of the earth to produce vital renewable resources must be maintained and, wherever practicable, restored or improved.

Comment. This principle serves as an introduction to the more

108. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.3/Rev.4, at 4 (1972).

109. U.N. Doc. A/CONF.48/4, Annex, at 3 (1972).

110. The change relating to the protection of "natural ecosystems," which was resisted in the final draft to "representative samples of natural ecosystems," was suggested by Brazil. U.N. Doc. A/CONF.48/WG.1/CRP.6 (1972). The United States was not happy about this restriction, and found it necessary to present to the Conference the following interpretative statement:

The United States of America places emphasis on the word "representative" which, in our view, ensures that the phrase means retention of a complete system with all of the complex interrelationships intact, not a portion thereof. Moreover, the size of the sample must be sufficient to represent the size of the whole.

U.N. Doc. A/CONF.48/14, at 118 (1972). Uruguay also entered a reservation to Principle 2, since it considered that much more than "representative samples" of ecosystems must be safeguarded; it was essential "to preserve, maintain the balance and ensure the rational exploitation of ecosystems as a whole." *Id.* at 115.

111. The U.S. Advisory Committee on the Stockholm Conference, commenting on one of the earlier drafts, suggested the inclusion in Principle 2 of a "declaration of common media (air and water) as a common trust." SECRETARY OF STATE'S ADVISORY COMMITTEE ON THE 1972 UNITED NATIONS CONFERENCE ON THE HUMAN ENVIRONMENT, STOCKHOLM AND BEYOND 143 (May 1972).

112. G.A. Res. 2740, Dec. 17, 1970, 25 IJN GAOR Supp. 38 (Doc. A/76-39) at 11.

specific Principle 4 relating to wildlife and is complemented by Principle 5 concerning the non-renewable resources.

Principle 3 is based on a Swedish proposal which presented the issue in a more explicit manner. It read as follows:

The productive basis of renewable resources of the earth, such as farmland, forests, crops and fish, which in many cases and places have been threatened or destroyed, must be maintained or enhanced.¹¹³

In a much more limited fashion, a joint proposal by Brazil, Egypt, and Yugoslavia would have stressed only the need to "restore, wherever possible, the productive capacity of those renewable resources that have been unnecessarily depleted."¹¹⁴ A later version, endorsed also by Costa Rica and Zambia, broadened the scope of this paragraph and came closer to the Swedish text by emphasizing the need to "maintain, and wherever practicable, restore or improve, the capacity of the earth to produce vital renewable resources."¹¹⁵

The Working Group of the Preparatory Committee amalgamated these proposals into a common text,¹¹⁶ which was adopted by the Stockholm Conference without any change. It must be noted, however, that at the Conference an unsuccessful attempt was made to add to this principle a sentence ascribing the degradation of the environment in the developing countries to low prices for their products.¹¹⁷ The essence of that idea, in a more moderate form, was later embodied in Principle 10.

113. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.2, at 3 (1972). Even more emphatically, the Netherlands proposed the following text:

Each State shall do its utmost to restore and improve the productive capacity of renewable resources of the earth, such as farmland, forests, crops and fish for the proper supply of future generations with food and other material products.

U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.5, at 3 (1972). Compare the proposals by India and Australia. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.6, at 2 (1972); *id.*, CRP.9, at 1 (1972).

114. U.N. Doc. A/CONF.48/WG.1(II)/CRP.3/Rev.3, at 3 (1972).

115. *Id.*, Rev.4, at 4 (1972).

116. U.N. Doc. A/CONF.48/4, Annex, at 3 (1972).

117. The idea of adding in Principle 3 a reference to the relationship between the human environment and the prices for primary products originated with Algeria. U.N. Doc. A/CONF.48/WG.1/CRP.17 (1972). It was later embodied in the following proposal by nine African countries:

In developing countries, the exhaustion of the capacity of the soil to produce these resources is caused not only by ecological processes but also from economic factors such as the inadequate payment made by rich countries for the agricultural and animal husbandry products of the developing countries. The prices of these products must therefore be reassessed to provide an effective remedy against the degeneration of this capacity in developing countries.

U.N. Doc. A/CONF.48/WG.1/CRP.22 (1972).

While one cannot quarrel with the content of this principle, it is regrettable that both here and in the companion Principles 4 and 5, the Working Groups rejected less ambiguous proposals which would have imposed upon each state the duty to do its utmost to fulfill the purposes of these principles. Nevertheless, one may argue that the word "must" in Principle 3 implies such a duty, and that all states, acting jointly and severally, ought to maintain and improve the capacity of the earth to produce such vital products as crops and fish.

Principle 4

Man has a special responsibility to safeguard and wisely manage the heritage of wildlife and its habitat which are now gravely imperilled by a combination of adverse factors. Nature conservation including wildlife must therefore receive importance in planning for economic development.

Comment. While some of the other principles of the Stockholm Declaration deal with subjects of only recent concern, Principle 4 deals with a topic which has been preoccupying international conferences for some time. A convention on the preservation of wild animals, birds, and fish in Africa was signed at London on May 19, 1900.¹¹⁸ Another convention for the preservation of fauna and flora in Africa was signed at London on November 8, 1933.¹¹⁹ A convention on nature protection and wild life preservation in the Western Hemisphere was opened for signature at Washington on October 12, 1940.¹²⁰ A worldwide treaty prohibiting or restricting commercial trade in endangered animal species was signed at Washington on March 3, 1973.¹²¹

For this very reason, it seems that the early Working Group did not find it necessary to deal with this issue. Only when India called attention to this problem at Stockholm, was a provision on the subject inserted in the Declaration, following quite closely the Indian text.¹²²

Though Principle 4 mentions only vaguely the adverse factors which imperil wildlife, the second sentence obliquely makes the point that it is economic development in various parts of the world on which the

118. 94 BR. AND FOR. STATE PAPERS 715 (1904).

119. 172 L.N.T.S. 241; 6 M. HUDSON, INT'L LEX. 504 (1937).

120. 161 U.N.T.S. 193; 8 M. HUDSON, INT'L LEX. 573 (1949).

121. The text is reproduced in SENATE EXECUTIVE 11, 93d Cong., 1st Sess. 1-36 (1973).

122. The Indian proposal at Stockholm read as follows:

Man, being only one of the many species inhabiting the earth, owes a special responsibility to safeguard the heritage of wild life and its habitat which are now

blame should be put. When new cities are built, when both industrialization and agriculture spread to new areas, and when new roads and dams bring revolutionary changes into the old natural habitats, decimated wildlife retreats further and further into the jungle or mountains, and finally, running out of space, completely perishes. As man's activities have caused this disaster, it is his special responsibility to do something about it, and this principle acknowledges that obligation.

Principle 5

The non-renewable resources of the earth must be employed in such a way as to guard against the danger of their future exhaustion and to ensure that benefits from such employment are shared by all mankind.

Comment. This principle can be traced to a Swedish proposal, which more pointedly suggested that:

The non-renewable resources of the earth, such as minerals, which in some cases are running out, must be employed, whenever possible, in such a way that they may be used again.¹²⁰

Consistent with their emphasis on programming, Brazil, Egypt, and Yugoslavia would have limited this principle to a statement of the need "to programme the utilization of the non-renewable resources in such a way that the requirements of mankind can be met for the foreseeable future."¹²¹ In a more elegant way, their joint proposal with Costa Rica and Zambia suggested that the need is to "employ the non-renewable resources of the earth in such a way as to guard against the danger of their future exhaustion."¹²² The Working

gravely imperilled by a combination of adverse factors. Nature conservation including wild life must, therefore, receive high priority in planning for economic development.

U.N. Doc. A/CONF.48/CRP.9, at 2 (1972).

121. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.2, at 3 (1972). The stronger Dutch version of this proposal read as follows:

Each State shall undertake all efforts to employ the non-renewable resources of the earth, such as minerals which in some cases are running out, in such a way that they may be used again.

U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.3, at 3 (1972).

124. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.3/Rev.3, at 3 (1972).

125. *Id.*, Rev.4, at 4 (1972). An Indian proposal stressed that the non-renewable resources "must be employed with greater economy." U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.6, at 2 (1972); U.N. Doc. A/CONF.48/CRP.9, at 2 (1972). In more detail, Australia would have worded this principle as follows:

Minerals and other non-renewable resources must be used thriftily, avoiding

Group embodied these proposals in the following text, corresponding to the first part of the final text:

The non-renewable resources of the earth must be employed in such a way as to guard against the danger of their future exhaustion.¹²⁶

The second part of the principle was suggested at Stockholm by Pakistan.¹²⁷ As was noted in the Comment to Principle 2, the idea of sharing of benefits by all mankind provides a link between the Stockholm Declaration and other United Nations Declarations which with increasing frequency put stress on the new social character of international law, which no longer protects the lucky few, but instead provides for more distributive justice. While the Sea-bed Declaration was limited to the resources of the seabed, the Stockholm Declaration applies the principle of equitable sharing more boldly to all non-renewable resources, wherever they may be situated.

Algeria presented at Stockholm an amendment which emphasized that increased prices for non-renewable resources were the best means for enabling the developing countries to avoid over-exploitation.¹²⁸ As revised by a group of nine African countries, the additional sentence in Principle 5 would have read as follows:

An increase in the base prices for such resources may enable the developing countries to avoid over-exploitation and to identify means of conservation, and even regeneration, of deposits.¹²⁹

Though this proposal was not accepted by the Working Group, it influenced the formulation of Principle 10, which introduces another equitable precept into the Declaration.

Principle 6

The discharge of toxic substances or of other substances and the release of heat, in such quantities or concentrations as to exceed the capacity of the environment to render them harmless, must be halted in order to ensure that serious or irreversible damage is not

Particular attention must be given to cases where, at present usage rates, known reserves will soon be exhausted.

U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.9, at 1 (1972).

126. U.N. Doc. A/CONF.48/4, Annex, at 3 (1972).

127. U.N. Doc. A/CONF.48/WG.1/CRP.3 (1972).

128. U.N. Doc. A/CONF.48/WG.1/CRP.11 (1972). The amendment would have read:

inflicted upon ecosystems. The just struggle of the peoples of all countries against pollution should be supported.

Comment. The need to deal with toxic substances appeared early in the drafting of the Declaration, and the following general provision on the subject was suggested by Sweden:

The issuing of non-natural or toxic substances or of excessive quantities of natural substances, has already led to severe damage, and must be checked to ensure that it does not lead to dangerous damages in the ecosystems.¹³⁰

The Working Group combined this proposal with one presented jointly by Brazil, Costa Rica, Egypt, Yugoslavia, and Zambia,¹³¹ and presented to the Stockholm Conference a revised text:

The discharge of toxic substances, or of other substances in such quantities or concentrations as to exceed the capacity of the environment to render them harmless, must be checked to ensure that serious or irreversible damage is not inflicted upon ecosystems.¹³²

Apart from some minor changes, the Conference added, as a result of a Chinese proposal,¹³³ the rousing second sentence about the "just struggle of the peoples of various countries against pollution." It might have been more useful if the Conference instead, or in addition, had in the first sentence imposed an obligation on states to take all practicable steps to halt the discharges of toxic and other harmful substances. There is such a general agreement on the special danger not only to ecosystems but also to human health involved in such discharges, that should an extra effort have been made at the Conference to embody a stronger obligation in this paragraph, it might have succeeded here, though it had been rejected in connection with several earlier, more general principles.

130. U.N. Doc. A/CONF.48/PC/WG.I(II)/CRP.2, at 3 (1971).

131. U.N. Doc. A/CONF.48/PC/WG.I(II)/CRP.3/Rev.4, at 4 (1972). For similar proposals by the Netherlands and India see U.N. Doc. A/CONF.48/PC/WG.I(II)/CRP.5, at 3-4 (1972); *id.*, CRP.6, at 2 (1972). Australia proposed a more specific text:

Steps must be taken to reduce to a minimum the broad dispersal into the environment of substances toxic to man, or to useful flora or fauna, especially non-biodegradable substances, to limit the wide dispersal of other non-biodegradable substances, and to prevent the accumulation, locally or widely, of harmful concentrations of substances which in small concentrations are harmless.

U.N. Doc. A/CONF.48/PC/WG.I(II)/CRP.9, at 1 (1972).

132. U.N. Doc. A/CONF.48/4, Annex, at 3 (1972).

133. See pp. 459, 462 *supra*.

Principle 7

States shall take all possible steps to prevent pollution of the seas by substances that are liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea.

Comment. This provision constitutes a specific application of Principle 6, and its inclusion was spurred by the slowness of parallel efforts to conclude a detailed convention on dumping of toxic substances in the ocean.¹³⁴ When it became obvious that such a convention would not be ready for signature at Stockholm, as was originally hoped, India suggested the addition of this paragraph,¹³⁵ which the Conference accepted without change.

It must be noted that this principle, unlike the previous ones, imposes an obligation on states to take all possible steps, though this obligation is limited perhaps by the word "possible," since what might be possible for some technologically advanced states might not be possible for most developing countries. Nevertheless, the provision proves that there was no absolute barrier at Stockholm to phrasing the principles in terms of state obligations; and as was noted in some of the previous Comments,¹³⁶ a more persistent effort on the part of a few delegations might have resulted in phrasing of most of the principles in terms similar to Principle 7.

If Principle 7 is compared with Principle 6, one further difference can be pointed out. While Principle 6 is limited to pollution which might inflict serious or irreversible damage upon ecosystems, Principle 7 applies more broadly to pollution caused by substances not only liable "to create hazards to human health, to harm living resources and marine life," but also likely "to damage amenities or to interfere with other legitimate uses of the sea." This difference might perhaps

134. After several meetings on the subject, at Ottawa in 1971, and at Reykjavik and London in 1972, a Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matters was signed at London, Mexico City, Moscow, and Washington on Dec. 29, 1972. U.N. Doc. A/AC.118/SC.III/L.29 (1973). Apart from more detailed provisions, this Convention contains the following more general obligations: Contracting Parties shall individually and collectively promote the effective control of all sources of pollution of the marine environment, and pledge themselves especially to take all practicable steps to prevent the pollution of the sea by the dumping of waste and other matter that is liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea.

Id. at 3.

135. U.N. Doc. A/CONF.48/CRP.9, at 2 (1972).

136. See pp. 459, 462 *supra*.

be explained by the fact that most ordinary discharges of toxic substances occur in, and are restricted in their effects to, a specific locality within national jurisdiction, and do not cause any harm abroad. On the other hand, damage to the oceans is causing harm to the common heritage of mankind or "the common international realm" (as stated in paragraph 7 of the Preamble), and there is, therefore, a stronger international interest in providing more binding and more precise obligations to protect the oceans.

Principle 8

Economic and social development is essential for ensuring a favorable living and working environment for man and for creating conditions on earth that are necessary for the improvement of the quality of life.

Comment. From the very beginning of the discussion of the question of the human environment, the United Nations was concerned about the relationship between the protection of the human environment and economic and social development. The first resolution on the subject by the Economic and Social Council already noted that "due attention to problems of the human environment is essential for sound economic and social development."¹³⁷ In his 1970 questionnaire, the Secretary-General raised the issue of how the Declaration could "best recognize the essential relationship between environment and development" and "take due account of the social and economic implications, in particular for the developing countries, of environmental action within the socio-economic context of development."¹³⁸ In reply, Colombia pointed out that "there is no fundamental conflict between the promotion of economic and social development and concern for environmental quality since the ultimate goal of both is the enhancement of the quality of human life."¹³⁹ The United States suggested the inclusion in the Declaration of a statement that:

The economic development and environmental quality are essential aspects of human progress, which can be pursued simultaneously

137. ECOSOC Res. 1346, July 30, 1968, 45 U.N. ECOSOC, Supp. 1 (Doc. E/4561) at 8 (1968). A similar view was expressed by the General Assembly in Res. 2398, Dec. 3, 1968, 23 U.N. GAOR, Supp. 18 (Doc. A/7218) at 2 (1969).

138. U.N. Doc. A/CONF.48/PC/WG.1/CRP.4, at 3 (1971).

by wise application of science and technology and the adoption of enlightened social attitudes and practices.¹⁴⁰

In its first draft, the Working Group would have merely inserted a statement in the Preamble that:

There is no fundamental conflict between economic and social development and the preservation and enhancement of the human environment, since both seek to provide and sustain increasing opportunities to all peoples for a better life.¹⁴¹

To ensure a proper consideration of all the ramifications of the relationship between environment and development, Mr. Strong, the Secretary-General of the United Nations Conference on the Human Environment, arranged for a meeting of a special panel of experts at Founex, Switzerland in June 1971. In its report, the panel emphasized that the major environmental problems of the developing countries are not caused so much by development as by the lack of it. Not merely the "quality of life" but "life itself is endangered by poor water, housing, sanitation and nutrition, by sickness and disease and by natural disasters." Thus, for the developing countries "development becomes essentially a cure for their major environmental problems."¹⁴²

These ideas were taken into account in a joint proposal by Brazil, Egypt, and Yugoslavia, in which the following nicely balanced statement was contained:

Development plans should be compatible with a sound ecology and adequate environmental conditions can best be ensured by the promotion of development.¹⁴³

A later version of this proposal gave priority to development in the following way:

140. *Id.* at 64.

141. U.N. Doc. A/CONF.48/PC.12, Annex J, at 2 (1971). See also *id.*, Annex H, at 6.

142. DEVELOPMENT AND ENVIRONMENT: REPORT OF A PANEL OF EXPERTS . . . (Founex, Switzerland, 4-12 June 1971), U.N. Doc. A/CONF.48/10, Annex J, at 3-4 (1971) [hereinafter Founex Report]. Concerning the conflict between the industrial and the developing countries before and at Stockholm see de Arzujo Castro, *Environment and Development: The Case of the Developing Countries*, 26 INT'L ORG. 401 (1972); Doud, *International Environmental Developments: Perceptions of Developing and Developed Countries*, 12 NATURAL RESOURCES J. 510 (1972); PELL-CARR REPORT at 8-10; Sullivan, *The Stockholm Conference: A Step toward Global Environmental Cooperation and Involvement*, 6 INDIANA L. REV. 267, at 270-73 (1972); Wijkman, *Second-best Solution at Stockholm*, 9 INTERECONOMICS 262 (1972). See also COMMISSION TO STUDY THE ORGANIZATION OF PEACE, THE UNITED NATIONS AND THE

Economic and social development is essential for adequately safeguarding those natural and other conditions on earth that are necessary for the maintenance and improvement of the quality of life of the present and future generations.¹⁴⁴

The final version of this proposal, co-sponsored by Costa Rica and Zambia,¹⁴⁵ was incorporated in the second draft of the Working Group and referred by it to the Stockholm Conference,¹⁴⁶ which approved it without change.

By thus making economic and social development an integral factor in the process of improving the human environment, this compromise formula enabled the Conference to avoid a dangerous clash between the developed and the developing countries, and made it possible for the developing countries to play a constructive role at Stockholm.

Principle 9

Environmental deficiencies generated by the conditions of underdevelopment and natural disasters pose grave problems and can best be remedied by accelerated development through the transfer of substantial quantities of financial and technological assistance as a supplement to the domestic effort of the developing countries and such timely assistance as may be required.

Comment. As noted in the Comment to Principle 8, the Founex Report put stress on the link between environmental deficiencies, on the one hand, and underdevelopment and natural disasters on the other hand.¹⁴⁷ The Report also pointed out that the concern for human environment should not only reinforce the commitment to development but also strengthen the commitment to international aid; it "should provide a stimulus for augmenting the flow of resources from the industrialized to the developing countries."¹⁴⁸

On the basis of a joint proposal by Brazil, Costa Rica, Egypt, Yugoslavia, and Zambia,¹⁴⁹ the Working Group of the Preparatory Committee presented to the Stockholm Conference the following proposal dealing with the linkage problem:

Environmental deficiencies generated by the conditions of under-

144. *Id.*, Rev. 3, at 3 (1972).

145. *Id.*, Rev. 4, at 3 (1972).

146. U.N. Doc. A/CONF.48/4, Annex, at 3 (1972).

147. Founex Report at 4.

148. *Id.* at 8.

149. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.3/Rev.4, at 3 (1972).

development pose grave problems and can best be remedied by and in the course of development.¹⁵⁰

The Working Group of the Stockholm Conference had to deal with several amendments to this provision. Pakistan suggested the addition of a phrase relating to massive financial assistance;¹⁵¹ the Holy See proposed to add a reference to "natural disasters, wars and intolerable social conditions";¹⁵² and Algeria would have ascribed underdevelopment to "various forms of foreign exploitation and domination."¹⁵³ A joint text by the Holy See, India, and Pakistan would have combined some of these ideas in the following manner:

Environmental deficiencies generated by: (a) the conditions of underdevelopment pose grave problems and can best be remedied by accelerated development through transfer of massive financial and technological assistance as a supplement to the domestic effort of the developing countries; (b) natural disasters, social degradation and wars call for timely remedial action at the national and international level for the afflicted countries concerned.¹⁵⁴

In the final text, the Working Group retained the references to underdevelopment and natural disasters, but omitted the references to social degradation, wars, and foreign exploitation and domination. To compensate for this, the Working Group put main emphasis on the need to transfer substantial (rather than "massive") quantities of financial and technical assistance in order to supplement the domestic effort of the developing countries. To make the point doubly clear the Working Group also added a perhaps redundant reference to "such timely assistance as may be required." This last phrase is

150. U.N. Doc. A/CONF.48/4, Annex, at 3 (1972).

151. The Pakistani amendment reads:

Environmental deficiencies generated by the conditions of underdevelopment pose grave problems and can best be remedied by accelerated development through transfer of massive financial and technological assistance to the developing countries.

U.N. Doc. A/CONF.48/WG.1/CRP.3 (1972).

152. The Holy See proposal would have added here the following sentence:

Violent damage inflicted on the environment by natural disasters, wars and intolerable social conditions calls for immediate appropriate action by the national and international community.

U.N. Doc. A/CONF.48/WG.1/CRP.7 (1972).

153. The Algerian version was as follows:

Environmental deficiencies ascribable to underdevelopment caused by various forms of foreign exploitation and domination pose grave and pressing problems and can best be remedied by and in the course of development.

U.N. Doc. A/CONF.48/WG.1/CRP.12 (1972). This text was incorporated in a joint proposal by nine African countries. U.N. Doc. A/CONF.48/WG.1/CRP.22, at 2 (1972).

154. U.N. Doc. A/CONF.48/WG.1/CRP.15 (1972).

probably meant to ensure quick assistance in case of natural disasters; it reinforces the special United Nations program in that field, designed to "ensure prompt, effective and efficient response to a Government's need for assistance, at the time of a natural disaster or other disaster situation, that will bring to bear the resources of the United Nations system, prospective donor countries and voluntary agencies."¹⁵⁵

The central issue of additional technical and financial assistance formed the subject of long negotiations at Stockholm and is further dealt with in Principle 12.

Principle 10

For the developing countries, stability of prices and adequate earnings for primary commodities and raw material are essential to environmental management since economic factors as well as ecological processes must be taken into account.

Comment. Principle 10 was added at Stockholm in order to emphasize the underlying idea of Principle 5 that the benefits from the exploitation of natural resources should be equitably shared by all mankind. Nine African countries originally proposed amendments implementing this idea in connection with Principles 3 and 5. It was contended that inadequate payments for primary agricultural and mineral products were responsible for the exhaustion of the developing countries' capacity to provide these products. To remedy this tragic situation, it was recommended that the base prices for these products be reassessed and sufficiently increased to enable the developing countries to avoid overexploitation.¹⁵⁶

The new text of Principle 10 presents the same idea in a more elegant phrasing. It connects the need for price stability and adequate earnings from sale of primary commodities and raw materials by the developing countries with the concept of environmental management. Only when these prices reach sufficient stability will it be possible for the developing countries to plan adequately for the preservation and improvement of the environment. The necessary financing can be obtained more reliably through an improvement in the terms of trade than through technical and financial assistance, which too often depends on political rather than ecological or economic factors.

¹⁵⁵ G.A. Res. 2816, Dec. 14, 1971, 26 U.N. GAOR, Supp. 29 (Doc. A/B429) at 85-86 (1972). This resolution established the post of a U.N. Disaster Relief Coordinator with a broad mandate to deal with natural disasters.

Principle 11

The environmental policies of all States should enhance and not adversely affect the present or future development potential of developing countries, nor should they hamper the attainment of better living conditions for all, and appropriate steps should be taken by States and international organizations with a view to reaching agreement on meeting the possible national and international economic consequences resulting from the application of environmental measures.

Comment. The Founex Report noted the fear of the developing countries that the insistence of the industrialized countries on rigorous environmental standards for products entering international trade might lead to an environmental "neo-protectionism." The industrialized countries willing to apply high environmental standards to their industries might insist on banning from international trade goods produced by industries in the developing countries applying less rigorous environmental standards. The Report recommended a comprehensive study of both the potential threats to the exports of the developing countries and the corrective action that may be possible. It also suggested the monitoring of the rise of non-tariff barriers on grounds of environmental concern.¹⁵⁷

To remove these apprehensions, Brazil, Egypt, and Yugoslavia jointly suggested the following text:

No environmental policy should adversely affect present or future development possibilities of developing countries or hamper the attainment of better living conditions for all.¹⁵⁸

A revised draft of this proposal, co-sponsored by Costa Rica and Zambia gave a more positive cast to this idea and supplemented it with an endorsement of further international action in this area.¹⁵⁹ This proposal was forwarded by the Working Group to the Stockholm Conference,¹⁶⁰ which accepted it with only minor editorial changes.

Principle 12

Resources should be made available to preserve and improve the environment, taking into account the circumstances and particular requirements of developing countries and any costs which may

¹⁵⁷ U.N. Doc. A/CONF.42/10, Annex I, at 26-28 (1972).

emanate from their incorporating environmental safeguards into their development planning and the need for making available to them, upon their request, additional international technical and financial assistance for this purpose.

Comment. At an early stage in the planning for the Stockholm Conference the fear arose that the new concern about environment might result in a diversion of funds previously used to further the development of the developing countries. Consequently, to compensate for this, the idea of "additionality" was suggested, i.e. that funds additional to those allocated for development should be provided for the preservation and improvement of the environment. Only in this way would it be possible to provide an equitable solution for the competitive demands of development and environment.¹⁶⁰

The principle of "equitable sharing of the cost of preserving and enhancing environmental quality" appears in the questionnaire circulated by the Secretary-General in 1970,¹⁶¹ and was endorsed immediately by Colombia, and indirectly by the Holy See and Italy.¹⁶²

The first draft of the Working Group contained two alternative texts on the subject, the first of which was limited to environmental implications of development projects, while the second appealed more strongly for an allocation of additional funds for all environmental purposes. The first draft read as follows:

States shall, when making assistance available for development, take into account not only the limited resources of developing countries but also the additional cost of incorporating environmental safeguards into their development planning.¹⁶³

The more comprehensive text was worded as follows:

To maintain and improve the ecological balance in developing countries, taking into account the limited resources at their disposal, new financial resources should be allocated for environmental purposes, in addition to the resources which are needed for development.¹⁶⁴

160. U.N. Doc. A/CONF.48/4, Annex, at 3 (1972).

161. For a detailed analysis of these issues see Founex Report at 28-33. For a summary of the discussion in the Preparatory Committee on this subject see U.N. Doc. A/CONF.48/PC/13, at 39-40 (1971).

162. U.N. Doc. A/CONF.48/PC/WG.1/CRP.4, at 14 (1971).

163. *Id.* at 26, 41, 44.

164. U.N. Doc. A/CONF.48/PC.13, Annex I, at 4 (1971).

165. *Id.* There was also a third, even more elaborate version, which read as follows:
To maintain and improve the ecological balance in developing countries, taking

The Working Group had a variety of new proposals before it at its second session¹⁶⁵ and amalgamated them into the text forwarded to Stockholm,¹⁶⁷ which was approved by the Conference with only minor changes.

While the final text does not impose on any group of countries a clear obligation to provide the additional assistance upon the "request" of the developing countries, the United States found it necessary to present to the Conference an interpretative statement:

The United States of America does not regard the text of this principle, or any other language contained in the Declaration, as requiring it to change its aid policies or increase the amounts thereof. The United States of America accepts the idea that added costs in specific national projects or activities for environmental protection reasons should be taken into account.¹⁶⁸

This statement was not inconsistent with United States support for the proposed Environment Fund, which was to be a "voluntary fund" designed to provide additional financing for environmental programs.¹⁶⁹ United States objections to Principle 12 were directed against any attempt to impose new obligations on the industrialized countries;

into account the limited resources at their disposal, their own commitments to development priorities and also the cost of incorporating environmental safeguards into their development planning, additional international financial resources, mostly in the form of grants, should be made available to those countries for environmental purposes, in addition to the resources which are needed for development.

Id., Annex II, at 12. One delegation (probably the U.S.) indicated that it could not accept any mandatory formulation for the provision of additional funds. *Id.*

166. The joint draft of Brazil, Costa Rica, Egypt, Yugoslavia, and Zambia stressed the need to

supply additional financial and technical assistance to developing countries, taking into account any costs that may emanate from their incorporating environmental safeguards into their development planning, in order to enable them, without adversely affecting their developmental priorities and needs, to participate fully, at the national and international levels, in programmes acceptable to them, designed with the objective of protecting and enhancing the environment.

U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.3/Rev.4, at 4 (1971). The Indian proposal on the subject read as follows:

When making assistance available for development, States shall take into account not only the limited resources of developing countries but also the additional cost of incorporating environmental safeguards into their development planning, and for this reason shall provide new financial resources for environmental purposes, in addition to the resources which are needed for development.

U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.6, at 4 (1971).

167. U.N. Doc. A/CONF.48/4, Annex, at 3 (1972).

168. U.N. Doc. A/CONF.48/14, at 118 (1972). For a comment on the United States position see Marston, *Stockholm: The Clean (but Impossible) Dream*, 8 *FOREIGN POLICY* 149, at 151-52 (1971).

169. U.N. Doc. A/CONF.48/14, at 63 (1972).

the United States argued that any new obligations can result only from a voluntary acceptance by the countries concerned.¹⁷⁰

The issue of "additionality" was also raised in the General Assembly of the United Nations when it was considering the Stockholm proposals. A draft resolution sponsored by ten countries included a paragraph recommending "respect for the principle that resources for environmental programmes, both within and outside the United Nations system, be additional to the present level and projected growth of resources contemplated in the International Development Strategy, to be made available for programmes directly related to developmental assistance." Australia, joined by France and the United Kingdom, raised objections to this provision, since they understood it to mean that "environmental assistance provided bilaterally to the developing countries was not to be considered valid technical assistance in terms of the targets and objectives established in the International Development Strategy." Nevertheless, the provision was adopted by the Second Committee by 74 votes to 3, with 26 abstentions.¹⁷¹ The vote on the resolution as a whole was slightly better, 85 votes to none, with 21 abstentions.¹⁷² The attempt to "strengthen" this principle by going beyond the Stockholm consensus thus backfired, and it became quite clear that the developed countries will not accept any further increase in the scope of their obligations with respect to additional assistance.

Principle 13

In order to achieve a more rational management of resources and thus to improve the environment, States should adopt an integrated and co-ordinated approach to their development planning so as to ensure that development is compatible with the need to protect and improve the human environment for the benefit of their population.

Comment. The need to provide for careful planning and rational management of natural resources was already voiced in the early stages of the preparatory process.¹⁷³ The first draft of the Working

170. See *PULL-CASE REPORT* at 8-9.

171. U.N. Docs. A/C.2/L.1236/Rev.1 (1972), and A/8901, at 21-23 (1972).

172. U.N. Doc. A/C.2/SR.1482, at 2-3 (prov. ed. 1972). The vote on this resolution at the plenary meeting of the Assembly was 110 votes to none, with 16 abstentions. U.N. Doc. A/PV.2112, at 21 (prov. ed. 1972).

173. The questionnaire of the Secretary-General, and the replies to it by Canada, Colombia, and the Soviet Union are contained in U.N. Doc. A/CONF.48/PC/WG.1/CRP.4, at 7, 23 (1972); *id.*, Add.2, at 2, 3 (1972). The Holy See noted that a "joint

Group accordingly recommended that:

States recognize that measures to preserve and enhance the environment constitute an integral part of long-term and sustained economic and social development, requiring consideration even at the earliest stages of development planning.¹⁷⁴

At its second session the Working Group condensed several additional formulations¹⁷⁵ into the following text:

Relevant environmental considerations should be integrated with economic and social planning to ensure that development plans are compatible with the need to protect and enhance the environment.¹⁷⁶

At the Stockholm Conference this provision was completely revised, imposing an obligation on states to adopt an approach to development planning which would adequately integrate into such planning relevant environmental factors.

Principle 14

Rational planning constitutes an essential tool for reconciling

benefit of all mankind may become a factor of great importance in the process of genuine unification of a world which is still too deeply marked by ideological, political and social divisions." U.N. Doc. A/CONF.48/PC/WG.1/CRP.4, at 36 (1972) (emphasis in original).

174. U.N. Doc. A/CONF.48/PC.12, Annex I, at 4 (1972). The following alternative formulation was also proposed:

States recognize that, in order to preserve and enhance the environment, it is useful to take into consideration environmental aspects in long-term planning of sustained economic and social development.

Id., Annex II, at 11.

175. A Swedish proposal read as follows:

Environmental considerations are an indispensable part of any national development plans and priorities and measures to preserve and enhance the environment must be integrated in all planning, implementation and supervision of economic and social development.

U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.2, at 4 (1972). The Netherlands preferred the following two paragraphs:

Each State recognizes the need to define and integrate environmental components into its development plans and priorities.

Each State recognizes that measures to enhance and preserve the environment constitute an integral part of long-term and sustained economic and social development, requiring appropriate consideration in accordance with each stage of development.

U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.3, at 4 (1972). For the Indian proposal

any conflict between the needs of development and the need to protect and improve the environment.

Comment. This companion principle adds to the concept of integrated planning envisaged in Principle 13 the idea of rational planning as a tool for reconciling any potential conflicts between the needs of development and environment.

The first draft of the Working Group would have stated forthrightly that:

States recognize the need to reconcile national environmental policies with national development plans and priorities.¹⁷⁷

A joint proposal by Brazil, Egypt, and Yugoslavia would have revised this proposal to read:

Rational planning procedures constitute an essential tool for an adequate equilibrium between the needs of development and the preservation and enhancement of the environment.¹⁷⁸

After further revision in cooperation with Costa Rica and Zambia,¹⁷⁹ this proposal was forwarded by the Working Group to the Stockholm Conference,¹⁸⁰ where it was approved with only minor drafting changes.

While this principle is closely connected with Principle 13, it is phrased in more general terms, and the "States should" formula has been avoided. It would be farfetched, however, to argue on the basis of this difference between the two principles that governments are reluctant to bind themselves to engage in rational planning. Nevertheless, it is curious that the Stockholm Conference at the last minute strengthened Principle 13 but left Principle 14 in the old form.

Principle 15

Planning must be applied to human settlements and urbanization with a view to avoiding adverse effects on the environment and obtaining maximum social, economic and environmental benefits for all. In this respect projects which are designed for colonialist and racist domination must be abandoned.

¹⁷⁷ U.N. Doc. A/CONF.48/PC.12, Annex I, at 4 (1972). Some delegations felt, however, that since it was already agreed that there was no fundamental conflict between development and environment, there was no need to "reconcile" environmental policies and development plans. *Id.*, Annex II, at 22.

¹⁷⁸ U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.3/Rev.3, at 3 (1972).

¹⁷⁹ *Id.*, Rev. 4, para. 4, at 3 (1972).

¹⁸⁰ U.N. Doc. A/CONF.48/4, Annex, para. 11, at 3 (1972).

Comment. This principle embodies two separate ideas, only loosely connected. The first part is of early origin; the second one was added at Stockholm at the last minute, on the basis of a Tanzanian proposal.

The problems of human settlements and urbanization had loomed large in the first report of the Secretary-General on the problems of the human environment,¹⁸¹ and "planning and management of human settlements for environmental quality" became a separate topic on the agenda of the Stockholm Conference.¹⁸² Though it was recognized that the issues involved in planning human settlements are not limited to those created by industrialization and urbanization but extend also to rural settlements and small towns,¹⁸³ some of the first proposals for a Declaration principle dealt only with urbanization.¹⁸⁴ More generally, Sweden and India proposed that:

Modern science and technology must be brought to bear in identifying and avoiding environmental risks in the use of natural resources and the planning of human settlements.¹⁸⁵

An elaboration of this proposal by Brazil, Costa Rica, Egypt, Yugoslavia, and Zambia,¹⁸⁶ slightly revised by the Working Group of the Preparatory Committee,¹⁸⁷ was forwarded to the Stockholm Conference, which incorporated it in Principle 15 as its first sentence, with the addition of the words "for all."

It was generally accepted that the twin problems of urbanization and non-urban settlements are not restricted to the developed countries but are confronting the developing countries on a large scale. Principle 15 is based on the hope that adequate planning can solve most environmental problems resulting therefrom.

The additional sentence, condemning colonialism and racism, was suggested by Tanzania,¹⁸⁸ and was strongly supported by a group of

¹⁸¹ U.N. Doc. E/4667, at 7-11 (1969).

¹⁸² U.N. Doc. A/CONF.48/1, at 2 (1972); see Comment on para. 3 of the Preamble, pp. 441-42 *supra*.

¹⁸³ U.N. Doc. E/4667, at 10-11 (1969).

¹⁸⁴ Thus Sweden suggested that:

The urbanization growth process must be kept under such a planned control that negative effects upon the environment do not counteract the positive aspects of urbanization.

U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.2, at 4 (1972).

¹⁸⁵ U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.2, at 4 (1972); *id.*, CRP.6, at 3 (1972). For a further discussion of the scientific and technological aspect of this proposal see Comment on Principle 15, pp. 478-80 *infra*.

¹⁸⁶ U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.3/Rev.4, para. 9, at 4 (1972).

¹⁸⁷ U.N. Doc. A/CONF.48/4, Annex, para. 12, at 4 (1972).

¹⁸⁸ U.N. Doc. A/CONF.48/WG.1/CRP.8 (1972).

African countries.¹⁸⁸ It is directed against projects which are designed to perpetuate the separation by races, especially in new housing developments. It is also applicable to so-called "bantustans," where an attempt is made to resettle whole tribes in new, often unproductive, areas.

Principle 16

Demographic policies, which are without prejudice to basic human rights and which are deemed appropriate by Governments concerned, should be applied in those regions where the rate of population growth or excessive population concentrations are likely to have adverse effects on the environment or development, or where low population density may prevent improvement of the human environment and impede development.

Comment. The touchy question of population growth had to be handled gingerly in the preparatory work for the Stockholm Conference. It was included in the program of the Conference under the heading relating to human settlements; the Conference was asked to review "environmental problems arising from population growth and distribution."¹⁸⁹ Apart from certain proposals made in connection with paragraph 5 of the Preamble to the Declaration,¹⁹¹ the issue of including a principle on the subject was first raised by Sweden:

Measures must be considered and taken where population growth is excessive or patterns of life have developed which are wasteful of natural resources or careless of the environment.¹⁹²

189. U.N. Doc. A/CONF.48/WG.1CRP.20 (1972); *id.*, CRP.22, at 2 (1972).

190. U.N. Doc. A/CONF.48/PC/6, at 9 (1970). The Conference paper on human settlements contained the following comment:

While the population crisis is of global dimension, the need to control population growth and to change migration flows is not felt equally in all countries. In some less industrialized countries, for instance, it may be counter productive to control the growth of sparse populations or to slow down or arrest migrations to small urban centres which, in these countries, constitute the growth poles of future development. On the other hand, both industrialized and developing countries may need to consider limiting population growth to achieve their development goals and to meet their environmental objectives in line with their available resources. In view of the convening for 1974 of a World Population Conference, no attempt is being made in this paper to discuss extensively population control problems.

U.N. Doc. A/CONF.48/6, at 8 (1972). An earlier paper stated even more firmly that: It was felt that the high levels of population density existing in certain countries as well as the problem of population growth which exists in some regions may have a global significance, but that it was the responsibility of each State to determine policies on the matter.

U.N. Doc. A/CONF.48/PC/13, at 16 (1971).

A joint proposal by Brazil, Egypt, and Yugoslavia would have suggested in a more balanced fashion that there was a need to "devise demographic policies that will take into account the environmental strains which, in some regions, arise from excessive population concentrations or too low demographic densities."¹⁹³ The idea was spelled out in a proposal by these countries, in which Costa Rica and Zambia joined, adding, *inter alia*, the important proviso that demographic policies should be without prejudice to basic human rights.¹⁹⁴ After a stylistic revision by the Working Group, this proposal was forwarded to the Stockholm Conference,¹⁹⁵ which adopted it, with only one minor change.

The idea of "population control" being taboo to many countries, Principle 13 employs the more general term "demographic policies." This principle distinguishes clearly between those regions in which there is overpopulation and those regions (especially in Africa and South America) where low population density not only impedes development but also results in low national income insufficient for improving the environment so that a larger population could live in it, thus creating a vicious circle.

The proviso on human rights in this principle safeguards the right of individuals to decide on the size of their families and protects them against governmental edicts (like those of the Pharaoh in the times of Moses) ordering families to restrict the number of births or providing for compulsory sterilization. An individual might owe a duty to his fellow inhabitants of this crowded planet to restrict his family to a reasonable size, but Principle 13 does not allow the state to force him to accept birth control. It must be the individual's independent, voluntary decision. To protect this basic human right, it may also be necessary to ensure that a state does not deprive an individual of access to means of birth control. Demographic policies prohibiting the dissemination of knowledge and devices needed for birth control would be as destructive of human rights as those directed toward compulsory birth control.

Principle 17

Appropriate national institutions must be entrusted with the

proposal was identical. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.6, para. 15, at 3 (1972).

195. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.3/Rev.3, at 4 (1972).

task of planning, managing or controlling the environmental resources of States with the view to enhancing environmental quality.

Comment. This principle is a truncated version of a proposal included in the first draft of the Working Group of the Preparatory Committee which read:

States shall establish and strengthen appropriate institutions to plan and manage their environmental resources and to elaborate and enforce environmental quality standards.¹⁹⁶

This proposal would have imposed directly on states the obligation to establish appropriate institutions, while the final text puts this obligation in an indirect form, though the word "must" is used, connoting such an obligation. The early proposal also contained the obligation to elaborate and enforce environmental quality standards; the final text merely speaks of "controlling" the environmental resources, which does not necessarily include the enactment of required standards.

The first erosion of the original proposal occurred when Sweden reworded it to omit the reference to an obligation of states, substituting for it the neutral "institutions must be established" formula.¹⁹⁷ A further rewording by India removed the duty to adopt environmental standards.¹⁹⁸ The idea of "control" in addition to management and planning was suggested by Australia.¹⁹⁹ A joint proposal by Brazil, Egypt, and Yugoslavia recognized the need to "ensure that appropriate institutions are given the task of managing the environmental resources with a view to enhancing environmental quality."²⁰⁰

The Working Group of the Preparatory Committee combined these proposals into a formula which was adopted without change by the Conference.²⁰¹

Principle 18

Science and technology, as part of their contribution to eco-

196. U.N. Doc. A/CONF.48/PC.12, Annex I, at 3 (1971). In a minor variation, the Dutch proposal substituted "Each State shall." U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.5, para. 8, at 4 (1972). Canada would have substituted the slightly weaker phrase "States should." U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.4 (1972).

197. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.2, para. 8, at 3 (1971).

198. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.6, para. 9, at 3 (1972).

199. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.9, para. 8, at 2 (1971).

200. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.3/Rev.3, at 4 (1972).

201. U.N. Doc. A/CONF.48/4, Annex, para. 14, at 4 (1972). A more elaborate provision on the subject was suggested at Stockholm by Iran, but was not adopted by the Conference Working Group. U.N. Doc. A/CONF.48/WG.1/CRP.5, at 2 (1972).

nomie and social development, must be applied to the identification, avoidance and control of environmental risks and the solution of environmental problems and for the common good of mankind.

Comment. While some have blamed science and technology as being the main villains responsible for environmental degradation, others have looked to them as the main means for preserving and improving the environment. This principle is based on the second point of view.

The first draft of the Working Group of the Preparatory Committee included a more positively worded statement of this principle:

States shall apply modern science and technology to the use of natural resources and to the planning of human settlements in such a way as to preserve and enhance the human environment for present and succeeding generations.²⁰²

Nevertheless, one delegation considered this statement too narrow, as it did not "reflect the need for international co-operation in the application of modern science and technology and its transfer to developing countries."²⁰³ This idea was later included in Principle 20.

Sweden was responsible for giving this principle the more impersonal cast.²⁰⁴ Australia presented a more general and more noble variation of this proposal which contained references to development and to the needs of all mankind.²⁰⁵ A simpler formula, suggested by Brazil, Egypt, and Yugoslavia,²⁰⁶ was later expanded into the following text:

Science and technology, as part of their contribution to economic and social organization and development process, can and should be so directed as to contribute to the prevention and solution, or

202. U.N. Doc. A/CONF.48/PC.12, Annex I, at 3 (1971).

203. *Id.*, Annex II, at 8.

204. The Swedish proposal was as follows:

Modern science and technology must be brought to bear in identifying and avoiding environmental risks in the use of natural resources and the planning of human settlements.

U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.2, at 4 (1971). For an identical proposal by India see U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.6, para. 14, at 3 (1972).

205. The Australian proposal read as follows:

Science and technology must be called upon to provide the solution of the problem of planning the development necessary for the adequate provision for the material needs of all mankind in such a way as to avoid a destructive impact on the environment, which would defeat the aim of development.

U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.9, at 2 (1971).

206. The first draft by Brazil, Egypt, and Yugoslavia was as follows:

Science and technology can and should be so directed as to equate and solve adequately environmental problems.

U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.3/Rev.1, at 2 (1972).

at least reduction, of environmental problems, including in respect of natural resources exploitation and the physical planning of human settlements.²⁰⁷

A third version, in the preparation of which Costa Rica and Zambia joined,²⁰⁸ was accepted by the Working Group of the Preparatory Committee and was forwarded to the Conference. It read:

Science and technology must be applied to the identification, avoidance and control of environmental risks and the solution of environmental problems, in the furtherance of economic and social development.²⁰⁹

At Stockholm, Brazil suggested rephrasing the reference to economic and social development and moving it to the beginning of the principle,²¹⁰ and Chile proposed that science and technology be considered as the "common property of mankind."²¹¹ The Working Group turned these ideas around; in particular, the Chilean proposal ended in the form of a goal for application of science and technology, "common property" being replaced by "common good."

The final text links application of science and technology to economic and social development; defines the tasks of science and technology as identifying environmental risks, helping in avoiding such risks, and assisting in controlling them should they nevertheless occur; and even more broadly imposes on scientists and technologists the duty to provide a solution for environmental problems. There is finally the injunction that science and technology should no longer be the handmaidens of evil but should instead become white knights acting always for the common good of mankind. Their duty should no longer be to serve some parochial interests of a nation or an industry, but only the interests of mankind as a whole.

Principle 19

Education in environmental matters, for the younger generation as well as adults, giving due consideration to the underprivileged, is essential in order to broaden the basis for an enlightened opinion and responsible conduct by individuals, enterprises and communities in protecting and improving the

207. *Id.*, Rev. 3, at 3 (1972).

208. *Id.*, Rev. 4, para. 10, at 3 (1972).

209. U.N. Doc. A/CONF.48/4, Annex, at 4 (1972).

210. U.N. Doc. A/CONF.48/WG.1/CRP.6 (1972).

environment in its full human dimension. It is also essential that mass media of communications avoid contributing to the deterioration of the environment, but, on the contrary, disseminate information of an educational nature, on the need to protect and improve the environment in order to enable man to develop in every respect.

Comment. The same UNESCO Conference on the Biosphere which was the first to suggest the preparation of a Declaration on the Human Environment also adopted several recommendations on the need for adequate environmental education and the possible contribution of mass media to such education.²¹² The Secretary-General of the United Nations in his first report on the subject pointed out that "education at all levels and in all countries is at present not properly designed to produce adequate understanding and appreciation of the very nature of environmental problems"; that "very little educational material suited to the actual requirements of developing countries is as yet available in this field"; that training of specialists and technicians to handle environmental problems is a major need in developing countries; and that mass media place too much emphasis "on sensational, but relatively unimportant issues, ignoring less spectacular, but more urgent and fundamental questions."²¹³ Consequently, the Secretary-General suggested that one of the topics of the Stockholm Conference should be the "educational aspects of environmental issues."²¹⁴ The Preparatory Committee agreed that "the aims of the environmental information and education action programme at the Conference should be first to increase man's understanding of the environment and secondly to build a sense of awareness and commitment for a better human environment." The Committee recommended that the Working Group on the Declaration should include in the Declaration a statement calling upon states "to educate and inform the people concerning their environmental rights and responsibilities."²¹⁵

Japan was the first to suggest that the Declaration include in the Preamble a paragraph recognizing the need "to overcome the serious deficiency in knowledge and education particularly for young generations regarding the problem of the deterioration of the environment

212. U.N. Doc. A/7291, Annex, at 14-18 (1968).

213. U.N. Doc. E/4667, at 18 (1969).

214. U.N. Doc. A/CONF.48/PC.1, Annex 1, at 5 (1970). For his later proposals on this subject see U.N. Docs. A/CONF.48/PC.11, at 21-22 (1971), and A/CONF.48/

which threatens the present and future generations of mankind.²¹⁶ But the first principle on the subject was proposed by Brazil, Costa Rica, Egypt, Yugoslavia, and Zambia, in the following form:

Education in environmental matters, especially for the younger generations, is essential in order to broaden the basis for an enlightened opinion and responsible conduct by individuals, enterprises and communities in protecting and enhancing the environment.²¹⁷

This proposal was forwarded without change by the Working Group of the Preparatory Committee to the Stockholm Conference.²¹⁸ A complete revision of it suggested by the Holy See would have introduced a number of additional ideas:

It is essential that public opinion should be continuously formed and informed on matters relating to the environment considered in its full anthropological dimension, in order to bring home to individuals, enterprises and communities a sense of their responsibilities in protecting and improving a truly human environment; it is necessary to provide the younger generations with appropriate instruction and to ensure that adults, especially the underprivileged, are continuously educated in the changing conditions of the environment.²¹⁹

While the Working Group of the Conference accepted some of these ideas, it reformulated them and added the sentence relating to mass media.

The final text recognizes that not only the young but also adults, and especially the underprivileged, need education in environmental matters. Such education would create a broader basis for enlightened public opinion and would lead to a more responsible conduct by individuals, especially those in charge of enterprises and communities.

After an indirect criticism of mass media for their contribution to the deterioration of the environment—having in mind perhaps the masses of newspapers which need to be disposed of every day and the noise pollution caused by ubiquitous transistor radios—Principle 19 exhorts them in a rather gingerly fashion merely to disseminate in-

216. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.7 (1972).

217. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.3/Rev.4, at 3 (1972). For different versions, combining education with scientific research, see U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.2, para. 9, at 3 (1971) (the Swedish proposal); U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.6, para. 21, at 3 (1972) (the Indian proposal).

218. U.N. Doc. A/CONF.48/4, Annex, para. 26, at 4 (1972).

219. U.N. Doc. A/CONF.48/WG.1/CRP.7 (1972).

formation of an educational nature on the need to protect and improve the environment.

This is a far cry from the original injunction of the Secretary-General of the Conference to develop "a dynamic sense of responsibility in the general public," and the Preparatory Committee's appeal for the promotion through all pedagogical means of a new environmental ethic ("man's being an integral part of the whole environment"), and thus avoid the creation of an environmental educational gap between governments and people.²²⁰

Principle 20

Scientific research and development in the context of environmental problems, both national and multinational, must be promoted in all countries, especially the developing countries. In this connection, the free flow of up-to-date scientific information and transfer of experience must be supported and assisted, to facilitate the solution of environmental problems; environmental technologies should be made available to developing countries on terms which would encourage their wide dissemination without constituting an economic burden on the developing countries.

Comment. The recognition of the need for scientific research in the field of environment can also be traced to the UNESCO Conference on the Biosphere.²²¹ In his first report, the Secretary-General of the United Nations recognized that significant research problems on global scale environmental phenomena required major international programs; that more emphasis needed to be placed on the biological and social sciences, especially as little was known about many extremely complex socio-cultural and psychological problems of the environment; and that more must be done about the transfer of technology from developed to developing countries.²²² In a more definite manner, the Preparatory Committee stressed the need to improve exchange of information on environmental matters between governments, particularly with regard to information other than scientific.²²³

In its first draft, the Working Group of the Preparatory Committee proposed merely that:

States shall promote the free exchange of scientific and other in-

220. U.N. Doc. A/CONF.48/PC/13, at 18-19 (1971).

221. U.N. Doc. A/7291, Annex, at 8-10, 22, 24 (1968).

222. U.N. Doc. E/4667, at 16-17 (1969).

223. U.N. Doc. A/CONF.48/PC.9, at 29 (1971). For a report on the subject by the Secretary-General see U.N. Doc. A/CONF.48/PC.11, at 26-33 (1971). For a criticism of this report see U.N. Doc. A/CONF.48/PC/13, at 22-23 (1971).

formation and facilitate the sharing of experience in combating environmental problems.²²⁴

The working group at its second session blended variations²²⁵ on this theme into the following text:

Research and the free exchange and transfer of scientific and other knowledge and experience must be promoted to the fullest extent practicable in order to facilitate the solving of environmental problems taking particularly into account the needs of developing countries.²²⁶

The Stockholm Conference was faced with a variety of amendments designed to strengthen this provision for the benefit of the developing countries. Brazil proposed deletion of "to the fullest extent practicable,"²²⁷ a phrase permitting the developed countries to argue that certain measures were not practicable (e.g., because of patent or copyright problems). Sudan thought that "taking into account the needs of developing countries" was too weak, and that the developed countries should be "giving priority to the needs of developing countries."²²⁸ Algeria suggested rather boldly that not only scientific knowledge but also technology should be transferred to the developing countries "free of charge,"²²⁹ while China proposed quite pointedly that:

Advanced science and technology in connexion with protecting and enhancing the environment should not be monopolized by one or two countries, and should be provided without compensation to the countries in need of them, particularly the developing countries.²³⁰

These ideas were expressed more gently in the final text, which states that "environmental technologies should be made available to developing countries on terms which would encourage their wide dissemination without constituting an economic burden on the developing countries."

India attempted to insert a reference to "development" by suggesting that the world community should take into account both the needs

224. U.N. Doc. A/CONF.48/PC.12, Annex I, at 4 (1972).

225. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.2, para.9, at 3 (1972); *id.*, CRP.3/Rev.4, para. 11, at 5 (1972); *id.*, CRP.6, para. 11, at 3 (1972).

226. U.N. Doc. A/CONF.48/4, Annex, at 4 (1972).

227. U.N. Doc. A/CONF.48/WG.1/CRP.6 (1972).

228. U.N. Doc. A/CONF.48/WG.1/CRP.2 (1972).

229. U.N. Doc. A/CONF.48/WG.1/CRP.11 (1972).

of the developing countries and "the necessity to further research and development in those countries."²³¹ By shifting this idea to the forefront of the principle, the final text placed emphasis on the promotion of both scientific research and development for the solution of environmental problems "in all countries, especially the developing countries."

Attempts to combine these drafts were made by two groups of African countries, which presented the following merged text:

Research and the free exchange and transfer of up-to-date scientific, technological and other knowledge and experience must be promoted to the fullest extent in order to facilitate the solving of environmental problems giving priority to the needs of developing countries.²³²

The final text is more carefully written. Free exchange and transfer of scientific, technological, and other knowledge and experience have been replaced by "free flow" of scientific information, while transfer of "experience" and of technology will no longer be free. The needs of developing countries are no longer given priority, but special arrangements are to be made for making environmental technologies available to them. While scientific research "must" be promoted, and free flow of scientific information "must be supported and assisted," in connection with environmental technologies the weaker "should be made available" is used; on the other hand, the weaker phrase "to the fullest extent practicable" has been deleted. In this way a compromise has been achieved, balancing the desire of the developing countries for maximum benefits against the fears of the developed countries concerning excessive commitments.

Principle 21

States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

Comment. This principle attempts to balance the right of a state to control matters within its territory with its responsibility to ensure

that what is done within that territory does not cause damage outside.

The right of a state to control the exploitation of resources within its territory is one of the basic components of state sovereignty. This right was recognized explicitly by several resolutions of the General Assembly. Thus in 1952 the General Assembly adopted a resolution pointing out that "the right of peoples freely to use and exploit their natural wealth and resources is inherent in their sovereignty and is in accordance with the Purposes and Principles of the Charter of the United Nations."²³³ In 1954 the General Assembly requested the Commission on Human Rights to include among its recommendations concerning international respect for the right of peoples and nations to self-determination one concerning their "permanent sovereignty over their natural wealth and resources, having due regard to the rights and duties of States under international law and to the importance of encouraging international co-operation in the economic development of under-developed countries."²³⁴ The Commission accordingly included in article 1 of both draft Covenants on Human Rights the following paragraph:

The right of peoples to self-determination shall also include permanent sovereignty over their natural wealth and resources. In no case may a people be deprived of its own means of subsistence on the grounds of any rights that may be claimed by other States.²³⁵

The General Assembly later rewrote this paragraph, and the final text reads:

All peoples may, for their own ends, freely dispose of their natural wealth and resources without prejudice to any obligations arising out of international economic co-operation, based upon the principle of mutual benefit, and international law. In no case may a people be deprived of its own means of subsistence.²³⁶

233. G.A. Res. 626, Dec. 21, 1952, 7 U.N. GAOR, Supp. 20 (Doc. A/2361) at 18 (1953). The idea appeared earlier, in a narrower form, in Res. 523, Jan. 12, 1951, which noted that "under-developed countries have the right to determine freely the use of their natural resources." 6 U.N. GAOR, Supp. 20 (Doc. A/2119) at 20 (1951).

234. G.A. Res. 837, Dec. 14, 1954, 9 U.N. GAOR, Supp. 21 (Doc. A/2890) at 21 (1954).

235. 10 U.N. GAOR, Annexes, Agenda Item 28 (Part II) (Doc. A/2929, ch. IV) at 13 (1955). A comment stated that "the right of self-determination certainly included the simple and elementary principle that a nation or people should be master of its own natural wealth or resources. The proposal, it was emphasized, was not intended to frighten off foreign investment by a threat of expropriation or confiscation; it was intended rather to warn against such foreign exploitation as might result in depriving the local population of its own means of subsistence." *Id.* at 15.

236. G.A. Res. 3200, Annex, Dec. 16, 1966, 21 U.N. GAOR, Supp. 16 (Doc. A/6316) at 49, 53 (1967).

In the meantime, the General Assembly requested in 1958 a survey of the status of the permanent sovereignty of peoples and nations over their natural wealth and resources, with due regard "to the rights and duties of States under international law and to the importance of encouraging international co-operation in the economic development of under-developed countries";²³⁷ and on the basis of that study²³⁸ the General Assembly adopted in 1962 a detailed resolution on the subject, declaring, *inter alia*, that:

The right of peoples and nations to permanent sovereignty over their natural wealth and resources must be exercised in the interest of their national development and of the well-being of the people of the State concerned.²³⁹

This resolution was reaffirmed in 1966, at the same time that the Covenants on Human Rights were approved; the General Assembly also confirmed that "the exploitation of natural resources in each country shall always be conducted in accordance with its national laws and regulations."²⁴⁰

In the light of this history, the Secretary-General suggested in his 1970 questionnaire that the Declaration on Human Environment include the "principle of national sovereignty over natural resources."²⁴¹ This suggestion was endorsed in several replies to the questionnaire.²⁴² Canada suggested the following six principles:

1. Every State has a sovereign and inalienable right to its environment including its land, air and water, and to dispose of its natural resources.
2. Every State has a right to environmental integrity corresponding to its right to territorial integrity.
3. Every State has the right to take all necessary and appropriate measures to protect its environmental integrity.

237. G.A. Res. 1314, Dec. 12, 1958, 13 U.N. GAOR, Supp. 18 (Doc. A/4090) at 27 (1959).

238. U.N. Docs. A/AC.97/5/Rev.2, E/3511, A/AC.97/13, at 244 (U.N. Publ. 61.V.6, 1962).

239. G.A. Res. 1803, Dec. 14, 1962, 17 U.N. GAOR, Supp. 17 (Doc. A/5217) at 13 (1963).

240. G.A. Res. 2158, Nov. 23, 1966, 21 U.N. GAOR, Supp. 16 (Doc. A/6316) at 29 (1967). *See also* G.A. Res. 2692, Dec. 11, 1970, 25 U.N. GAOR, Supp. 28 (Doc. A/8028) at 63 (1971). In 1972 the General Assembly broadened the scope of the right to control natural resources by affirming that states' permanent sovereignty extended to "all their natural resources, on land within their international boundaries, as well as those found in the sea-bed and the subsoil thereof within their national jurisdiction and in the superjacent waters." U.N. Doc. A/RES/1016, Jan. 15, 1972.

241. U.N. Doc. A/CONF.48/PC/WG.1/CRP.4, at 13 (1971).

242. *Id.* at 58 (Switzerland), 60 (United Arab Republic); *id.*, Add.2, at 6 (Soviet Union).

4. Every State has a duty to conduct its activities with due regard to their effects upon the environment of other States.

5. No State may use or permit the use of its territory in such a manner as to cause damage to the environment of other States or to the environment of areas beyond the limits of national jurisdiction.

6. No State may use areas beyond the limits of national jurisdiction in such a manner as to cause damage to the environment of such areas or to the environment of other States.²⁴³

The Working Group of the Preparatory Committee included in the preamble to its first draft two parallel statements:

Each State has inalienable sovereignty over its natural resources; Each State has the responsibility to exercise its sovereignty over its natural resources in a manner compatible with the need to ensure the preservation and enhancement of the human environment.²⁴⁴

Some members of the Working Group would have preferred to merge these two paragraphs in order to place the concept of sovereignty in its environmental context. Others argued that the exercise of sovereignty cannot be subject to qualification or limitation and urged the deletion of reference to the need to preserve the environment in the second paragraph.²⁴⁵ It was also suggested that, in order to follow more closely the resolutions of the General Assembly on the subject, a reference should be made to the right of a state to freely exploit its natural resources.²⁴⁶

A more radical proposal would have included in the Preamble either a statement that "[e]ach State has inalienable sovereignty over its environment," or, by merging the old and the new text: "Each State has inalienable sovereignty over its environment and over its resources."²⁴⁷ The same delegation (probably Canada) also proposed the insertion in the draft Declaration of a new principle:

Each State has a sovereign right to its environment and to dispose of its natural resources and a right to take all necessary and appropriate measures to protect its environmental integrity.²⁴⁸

243. *Id.* at 3.

244. U.N. Doc. A/CONF.48/PC.13, Annex I, at 1 (1971).

245. *Id.*, Annex II, at 5.

246. *Id.*

247. *Id.* at 12.

In support of this proposal, it was argued that as a first step in the development of international environmental law it is necessary to make clear the principle that "sovereignty includes the right to environmental integrity and the right to maintain that integrity in a wholesome and unimpaired condition."²⁴⁹ Another delegation supported this proposal, subject to the condition that any such right can be exercised only in accordance with the Charter of the United Nations and the general principles of international law.²⁵⁰ Several other delegations opposed these proposals, however. They observed that, unlike the concept of sovereignty, the concept of the human environment did not have any clearly established limits; consequently, the proposed new principle could be interpreted as "implying that each State was left free to define the extent of its environment" to the prejudice of the established principles of international law.²⁵¹ One must note, however, that the proposed amendment would have effectively disposed of this objection, since it would have subjected the exercise of the right of a state to protect its environmental integrity to the general principles of international law. The idea of referring to international law was used in another context, however, when the Working Group decided to include among the principles the following Principle 6:

Each State has the responsibility, in accordance with the Charter of the United Nations and consistent with the principles of international law, to conduct its activities so as not to cause damage to the environment of other States, or to the environment of areas beyond the limits of national jurisdiction.²⁵²

When the matter was reconsidered at the second session of the Working Group, Sweden attempted to move the discussion to a different level by suggesting the following broad principle:

249. *Id.* at 13.

250. *Id.* at 14.

251. *Id.*

252. *Id.*, Annex I, at 5. The following alternative text also found some support:

Each State, in accordance with the Charter of the United Nations and consistent with the principles of international law, shall conduct its activities so as not to cause damage to the environment of other States or to the environment of areas beyond the limits of national jurisdiction.

Id., Annex II, at 8. Canada proposed later the following version which also included non-governmental activities:

States have the responsibility, in accordance with the Charter of the United Nations and the principles of international law, to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States, or to the environment of areas beyond the limits of national jurisdiction.

In bringing about economic and social development and adequate conditions for all, states whether acting individually in the exercise of their sovereignty over their natural resources or in concert through international organizations, must use their power to preserve and enhance the human environment and to ensure favourable living and working conditions for all.²⁵³

In an effort to avoid a direct statement of state responsibility, Sweden also proposed that:

It must be ensured by every state that activities within its jurisdiction or control are conducted so as not to cause damage to the environment of other states or of areas beyond the limits of national jurisdiction.²⁵⁴

A more precise formulation of the first of these two principles was suggested by the Netherlands:

Each State, when exercising sovereignty over its natural resources for economic and social development, shall take due account of the effect of its activities on the ecological balance of the biosphere.²⁵⁵

An Australian attempt to combine the principles relating to national sovereignty over resources and to the duty of a state not to cause damage beyond its boundaries took the following form:

In conformity with the Charter of the United Nations and the principles of international law, each State should, without prejudice to its sovereign right to exploit its own resources, take effective steps to ensure that present or future activities within its jurisdiction or control cause no damage to the environment of other States or areas beyond the limits of national jurisdiction. It should consult and cooperate with other States as relevant.²⁵⁶

The sovereign right of each country to exploit its resources was put in the forefront of the joint proposal by Brazil, Egypt, and Yugoslavia, but was accompanied by recognition that this right is limited by the need to avoid harmful effects on the environment beyond its borders.²⁵⁷ A later version of this proposal made clear that this right

253. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.2, at 3 (1971).

254. *Id.* at 4.

255. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.5, at 3 (1972). Its second principle was close to Principle 6 of the Working Group. *Id.* para. 14, at 4-5. For an Indian variant of the two principles see U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.6, paras. 7-8, at 3 (1972).

256. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.9, at 2 (1972).

257. This early draft of the joint three-State proposal read as follows:

shall be exercised "in consistency with the Charter of the United Nations and the principles of international law."²⁵⁸ The final version of this proposal, co-sponsored by Costa Rica and Zambia, was accepted by the Working Group, except that the reference to "environmental policies, standards and criteria" was shortened to "environmental policies."²⁵⁹ While no changes were made in this paragraph at Stockholm, the United States made a statement of interpretation claiming that:

[N]othing contained in this principle, or elsewhere in the Declaration, diminishes in any way the obligation of States to prevent environmental damage or gives rise to any right on the part of States to take actions in derogation of the rights of other States or of the community of nations. The statement on the responsibility of States for damage caused to the environment of other States or of areas beyond the limits of national jurisdiction is not in any way a limitation on the above obligation, but an affirmation of existing rules concerning liability in the event of default on the obligation.²⁶⁰

The consensus reached in the Working Group of the Preparatory Committee on this principle was so fragile that the Working Group of the Conference not only refused to clarify the text, as suggested by the United States, but also rejected a number of amendments of the kind that it had no trouble in accepting in connection with other principles. Thus it rejected a Brazilian proposal to delete the restrictive reference to the Charter of the United Nations and the principles of international law, as well as another Brazilian proposal to restore an earlier text allowing each state to follow, without any restriction, not only its environmental policies but also its "standards and criteria."²⁶¹ The Working Group also refused to make a concession to the group of nine African countries, which wanted to make clear that the sovereign right to exploit resources was accompanied by the right to control them.²⁶²

The sovereign right of each country to exploit its own resources in accordance with its own environmental policies, standards and criteria shall be exercised in such a manner as to avoid producing harmful effects on other countries or on areas beyond national jurisdiction.

U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.3/Rev.2, at 2 (1972).

258. *Id.*, Rev.3, at 3 (1972).

259. Compare U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.3/Rev.4, para. 5, at 3 (1972) with U.N. Doc. A/CONF.48/4, Annex, para. 18, at 4 (1972).

260. U.N. Doc. A/CONF.48/14, at 118 (1972).

261. U.N. Doc. A/CONF.48/WG.1/CRP.6 (1972).

262. U.N. Doc. A/CONF.48/WG.1/CRP.22, at 2 (1972).

The final text does not merely reiterate the generally accepted principle that a state has the sovereign right to exploit its own resources, but gives the blessing of the Charter and of the principles of international law to the right of a state to exploit these resources pursuant to its own environmental policies. While this provision does not go as far as to assert that a state has unlimited sovereignty over its environment, it comes quite close to such an assertion. An over-broad interpretation of this sovereign right would be inconsistent with the rest of the Declaration which emphasizes the fact that no part of the global environment can be separated from the rest and that it has to be preserved and improved for the benefit of all the people of both the present and future generations. No state can claim an absolute right to ruin its environment in order to obtain some transient benefits. It should think not only of the effect on other peoples but also about the future of its own people. It should not ruin the soil of its country in order to get a few extra crops or to sell more wood or pulp. Destruction and depletion of irreplaceable resources are clearly condemned by the Declaration, even when there is no effect abroad, and a state cannot engage in such activities behind the shield of misconceived sovereignty. It would have been better, therefore, if some clearer guideline had been inserted in the first part of Principle 21. It is unfortunate that the Conference did not consider the proposal by the Holy See that in the exploitation of national resources states should follow "a just environmental policy."²⁶³ There is clearly need here for some standard referring to the common good rather than to states' own policies, however inadequate.

The second part of Principle 21 was considered by many so important that they were willing to pay the price of the imperfections of the first part in order to nail down a crucial rule of general importance. The Canadian delegation, for instance, later commented that this principle reflects existing rules of international law, the first element in it stressing the rights of states, "while the second element made it clear that those rights must be limited or balanced by the responsibility to ensure that the exercise of rights did not result in damage to others." This balancing of rights and responsibility was essential "to reconcile national interests and those of the international community."²⁶⁴ While the principle of responsibility of one state for

²⁶³ U.N. Doc. A/CONF.48/WG.1/CRP.7, at 2 (1972).

²⁶⁴ U.N. Doc. A/AC.138/SC.111/SR.20, at 4 (prov. ed. 1972). Principles 21 and 22 have been accepted by the Governments of the United States and Canada, in a joint communiqué of July 23, 1972, as the basis for "the development of law and procedures for settlement of disputes of an environmental nature."

damage caused in another is generally recognized, though there have been only a few relevant international decisions on the subject,²⁶⁵ Principle 21 makes clear that the rule of responsibility applies not only to damage caused to the environment of other states but also to any injury inflicted on the environment of "areas beyond the limits of national jurisdiction," such as the high seas or Antarctica. Within the ambit of the principle are not only damage-causing activities within the area under a state's jurisdiction, including its territorial waters, but also activities conducted by persons or ships under its "control," wherever they may act. This extension of the principle applies clearly to citizens of a state, to ships flying its flag, and perhaps even to corporations incorporated in its territory. It is more doubtful whether it applies to residents of a state, to ships owned by its nationals but flying other countries' flags, or to foreign subsidiaries controlled by corporations incorporated in the state. Even if broad application of this principle should result in concurrent responsibility of several states, it may be hoped that states would be willing to interpret this provision in a manner which would best ensure an adequate preservation of the human environment.

Principle 22

States shall co-operate to develop further the international law regarding liability and compensation for the victims of pollution and other environmental damage caused by activities within the jurisdiction or control of such States to areas beyond their jurisdiction.

Comment. This principle is closely connected with the previous one. If states are bound by international law to prevent activities which damage the environment in other states or in areas beyond national jurisdiction, states should also be responsible for damage actually caused by such illegal activities. This link appeared earlier in the questionnaire circulated by the Secretary-General in 1970, in which he suggested the inclusion in the Declaration of "the principle that States are internationally responsible for harm caused by them or their citizens to environmental resources shared with other States and for ensuring that national activities are carried out in conformity

mental Quality, Meeting between Mr. Train and Mr. Davis to Discuss Environmental Concerns, July 14, 1972, at 1 (mimeo. press release). See also 3 ENVIRONMENTAL REP., CURR. DEV. 343 (1972).

with the principles set forth in the present Declaration."²⁶⁶ While some replies to this questionnaire accepted the idea of liability of a state for damage caused to areas beyond that state's jurisdiction,²⁶⁷ others expressed doubts about it.²⁶⁸

The Working Group of the Preparatory Committee had before it a simple proposal by Canada that:

Each state has the responsibility to compensate for damage to the environment caused by activities carried on within its territory.²⁶⁹

Other states were not ready, however, to go so far, and proposed that the matter be referred for further study. As a compromise, they agreed to include in the Declaration a proposal that:

States shall examine the possibility of concluding international agreements providing for compensation in respect of damage to the environment caused by its activities.²⁷⁰

An alternative proposal would have limited liability to activities prohibited by special agreements:

Each State has the responsibility to compensate for damage to the environment caused by non-performance or disregard of the specific engagements to which it is a party.²⁷¹

The main opposition to the proposal was based on fear that it would be "tantamount to endorsing the principle of the absolute liability of States," based on the risk theory. Preference was expressed for restricting responsibility to cases of "negligence of a State, imputable either to inaction or the failure to fulfil specific commitments."²⁷²

At the second session of the Working Group, Australia presented a draft paralleling the language of the previous principle:

In conformity with the Charter of the United Nations and the principles of international law, when such damage has occurred, the State, activities within which were responsible for the damage,

266. U.N. Doc. A/CONF.48/PC/WG.1/CRP.4, at 14 (1971).

267. *Id.* at 16 (Colombia), 38 (Switzerland).

268. *Id.* at 19 (Austria), 46 (Japan).

269. U.N. Doc. A/CONF.48/PC.12, Annex I, at 3 (1971). For a previous draft see U.N. Doc. A/CONF.48/PC/WG.1/CRP.4/Add.2, para. 7, at 3 (1971).

270. U.N. Doc. A/CONF.48/PC.12, Annex I, at 3 (1971). It was suggested that the text might be strengthened by changing the beginning phrase to "States shall seek to conclude." *Id.*, Annex II, at 9. Another proposal would have made the last phrase more precise by reformulating it as follows: "... caused to the environment of other States by activities carried on within or outside their territory." *Id.* at 10.

271. *Id.* at 9.

272. *Id.* at 15.

should rectify or compensate for the damage and co-operate in the development of procedures for settling disputes which may arise.²⁷³

A similar proposal made by Brazil, Costa Rica, Egypt, Yugoslavia, and Zambia emphasized the need to "provide, in accordance with the Charter of the United Nations and the principles of international law, economic indemnification for damage caused beyond national jurisdiction, whenever compensation by other means is not feasible."²⁷⁴ The more conservative viewpoint prevailed, however, and the Working Group recommended the following text:

States shall co-operate to develop further the international law regarding liability and compensation in respect of damage which is caused by activities within their jurisdiction or control to the environment of areas beyond their jurisdiction.²⁷⁵

At Stockholm only minor changes were made in this draft. In particular, the Working Group of the Conference rejected a Chinese proposal which would have added the following sentence:

The victim state has the right to demand compensation from the polluter-country which has discharged or dumped at will toxic substances, thereby seriously polluting and poisoning the environment of other states.²⁷⁶

While Principle 22 contains merely a promise that states shall co-operate to develop further the international law regarding liability for environmental damage, the word "further" contains an admission that some law on the subject already exists. It also makes clear that liability is not limited to pollution but also extends to other environmental damage, for instance, that caused by "environmental aggression," such as weather and climate modification, changing the flow of ocean currents, melting the polar icecaps, etc. Principle 22 follows Principle

273. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.9, at 2 (1972). More forthrightly, Canada suggested that:

States have the responsibility in accordance with the Charter of the United Nations and the principles of international law, to compensate for damage caused by activities within their jurisdiction or control and should co-operate in the development of procedures for the settlement of disputes which may arise.

U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.4 (1972).

274. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.3/Rev.4, at 4 (1972). A similar proposal was made at Stockholm by Brazil. U.N. Doc. A/CONF.48/WG.1/CRP.6 (1972).

275. U.N. Doc. A/CONF.48/4, Annex, at 4 (1972).

276. U.N. Doc. A/CONF.48/WG.1/CRP.23, at 3 (1972).

21 in broadening liability; it applies not only to activities within the jurisdiction of states, but also to those under their control.

This principle has been hailed by the Canadian Government as one laying the foundation for the future development of international environmental law; less than a month after its adoption this principle was applied by the Governments of Canada and the United States to environmental questions which may arise between them, and they agreed to cooperate in the development of arrangements concerning compensation for the victims of pollution.²⁷⁷

During the preparatory stage of the Conference, Principles 21 and 22 relating to possible damage to the environment and to liability for it were accompanied by a third principle relating to the duty to provide a proper warning to other states. The Working Group of the Preparatory Committee originally proposed that:

Relevant information must be supplied by States on activities or developments within their jurisdiction or under their control whenever they believe, or have reason to believe, that such information is needed to avoid the risk of significant adverse effects on the environment in areas beyond their national jurisdiction.²⁷⁸

This so-called "Principle 20" was the subject of lengthy debates at Stockholm and was forwarded by the Conference to the 27th session of the General Assembly, which incorporated a modified version of it in a separate resolution. Its origins can be traced to the suggestion by the Secretary-General that the Declaration include a principle relating to:

[T]he right and duty to consult each other if there is reason to believe that any planned activity may cause serious harm to the environment in general or infringe upon the environmental rights of other States.²⁷⁹

The Working Group of the Preparatory Committee had before it a proposal by the United States that:

Whenever a proposed activity by any State might cause grave harm to human environment beyond its territory the State or States

277. U.N. Doc. A/AC.138/SC.III/SR.20, at 4-5 (prov. ed. 1972). See also note 264 *supra*.

278. U.N. Doc. A/CONF.48/4, Annex, para. 20, at 4 (1972).

279. U.N. Doc. A/CONF.48/PC/WG.1/CRP.4, at 14 (1972). The idea was approved by several Governments. See *id.* at 29 (Austria), 26 (Colombia), 28 (Switzer-

planning such an activity should undertake appropriate international consultations before proceeding with any such activity.²⁸⁰

Canada presented a slightly more elaborate proposal, clarifying what was meant by "appropriate international consultations":

Every State has a duty to consult with other States before undertaking activities which may damage the environment of such States, and a similar duty to consult with the appropriate international organization, if any, before undertaking activities which may damage the environment in areas beyond the limits of national jurisdiction.²⁸¹

Since the Working Group could not agree on a proper formulation, it presented two complementary texts, one emphasizing the duty to consult and the other empowering a state to demand consultation if another state's activities threaten damage. They read as follows:

Each State has the duty to undertake international consultations before proceeding with activities which may cause damage to the environment of another State or to the environment of areas beyond the limits of national jurisdiction.

A State having reason to believe that the activities of another State may cause damage to its environment or to the environment of areas beyond the limits of national jurisdiction, may request international consultations concerning the envisaged activities.²⁸²

Some delegations contended that these provisions were not suitable for inclusion in the Declaration because they were either "inherent in the obligations undertaken by Member States in the Charter of the United Nations, and thus redundant," or "were an extension of these obligations which would be outside the scope of a declaratory and inspirational instrument."²⁸³ It would be more appropriate to deal with them through international treaties, which would require, however,

280. *Id.*, Add.1, at 3 (1972). A later version of the Canadian proposal read: States should give notice to other States (or appropriate international agency, if any) and, where requested, should undertake international consultations before proceeding with activities which may cause damage to the environment of another State or to the areas beyond the limits of national jurisdiction; such notice shall include sufficient facts as will permit the recipient State to assess the probable effect of the proposed activities.

U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.4, at 2 (1972).

281. U.N. Doc. A/CONF.48/PC.12, Annex I, at 3 (1972). It was also suggested

detailed negotiations.²⁸⁴ Others opposed these provisions on substantive grounds, arguing that they "neither had a sound juridical basis nor could be considered politically desirable, at least at the present stage of scientific knowledge of the problems of the environment."²⁸⁵

At the second session of the Working Group the Netherlands suggested forthrightly that:

States shall inform other States directly concerned or appropriate international organizations on any envisaged activity which may cause damage to the environment of those States or of areas beyond the limits of national jurisdiction; in appropriate cases States shall enter into International consultations.²⁸⁶

A more limited proposal was made by Australia, which, however, contained the additional obligation to engage in a "collaborative investigation."²⁸⁷ Brazil, Egypt, and Yugoslavia proposed an even vaguer statement, stressing the need to "supply the relevant information on facts that, in the view of those responsible for them, may provoke serious environmental damage beyond national jurisdiction."²⁸⁸ As revised later, in cooperation with Costa Rica and Zambia, this proposal was accepted by the Working Group and became Principle 20 of the Preparatory Committee draft.²⁸⁹

At Stockholm a group of African countries suggested a strengthening of the obligation by deleting the words "they believe, or have reason to believe that" and by omitting the word "significant."²⁹⁰ Argentina would also have strengthened the obligation by adding the following additional sentence:

This information must also be supplied at the request of any of the Parties concerned, within appropriate time, and with such data as may be available and as would enable the above-mentioned

284. *Id.* at 9.

285. *Id.*

286. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.5, at 5 (1972).

287. The Australian proposal was as follows:

When, in any State, a major activity is contemplated that has an appreciable probability of damaging the environment of another State, or States, or of international areas, the first State should inform the States concerned and, if requested, undertake detailed collaborative investigations.

U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.9, at 2 (1972).

288. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.3/Rev.3, at 4 (1972).

289. See note 278 *supra*.

290. U.N. Doc. A/CONF.48/WG.1/CRP.20 (1972); *id.*, CRP.22, at 3 (1972). These amendments were also supported by several Latin American countries. U.N. Doc. A/CONF.48/14, at 129; *id.*, Corr.1 (1972).

Parties to inform and judge by themselves of the nature and probable effects of such activities.²⁹¹

On the other hand, Brazil suggested the following limitation:

No State is obliged to supply information under conditions that, in its founded judgement, may jeopardize its national security, economic development or its national efforts to improve environment.²⁹²

The Conference decided to refer the text and the proposed amendments for the consideration of the General Assembly²⁹³ in the hope that a consensus would emerge by the time the General Assembly discussed that principle.²⁹⁴

Brazil, which was the main opponent in Stockholm of adopting a principle which might be misused for placing obstacles in the path of development, took the lead at the General Assembly in presenting a draft resolution which was co-sponsored by a large group of developing countries and a few developed countries. It was proposed that the General Assembly adopt the following resolution:

The General Assembly, . . .

Bearing in mind that, in exercising their sovereignty over their natural resources, States must seek, through effective bilateral and multilateral co-operation or through regional machinery, to preserve and improve the environment,

1. *Emphasizes that, in the exploration, exploitation and development of their natural resources, States must not produce significant harmful effects in zones situated outside their national jurisdiction;*

2. *Recognizes that co-operation between States in the field of the environment, including co-operation towards the implementation of principles 21 and 22 of the Declaration of the United Nations Conference on the Human Environment, will be effectively achieved if official and public knowledge is provided of the technical data relating to the work to be carried out by States within their national jurisdiction with a view to avoiding significant harm that may occur in the human environment of the adjacent area;*

3. *Recognizes further that the technical data referred to in the preceding paragraph will be given and received in the best spirit*

291. U.N. Doc. A/CONF.48/CRP.5 (1972).

292. U.N. Doc. A/CONF.48/14, at 119 (1972).

293. *Id.*

294. *Id.* at 116 (statement by Zambia).

of co-operation and good neighbourliness, without this being construed as enabling each State to delay or impede the programmes and projects of exploration, exploitation and development of the natural resources of the States in whose territories such programmes and projects are carried out.²⁹⁵

Emphasizing that "conditions of under-development were incompatible with an environment which was both sociologically and ethically acceptable," and that "the responsibility of the international community for its environment must, first and foremost, be translated into terms of global co-operation for global social and economic expansion and development,"²⁹⁶ the Brazilian representative explained that the proposed resolution was intended to reinforce, in an operational and practical manner, the scope and significance of Principles 21 and 22, which he whole-heartedly supported. Its purpose was to provide member states with "the guidelines they required in order to co-operate in a true sense of good neighborliness."²⁹⁷

Some states were, however, opposed to the revival of Principle 20, arguing, *inter alia*, that it was for each state to decide the kind of information it wished to transmit.²⁹⁸ Canada attempted to revise the proposed resolution, because it believed that the proposal made an attempt to reinterpret Principles 21 and 22 of the Stockholm Declaration. The Canadian representative noted that:

In effect, [the draft resolution] appeared to imply that all that was required to ensure international co-operation on environmental matters was the provision of information on activities which might have a harmful effect on other States. It suggested that the implementation of principles 21 and 22 would be achieved if knowledge was provided of the technical data relating to the work envisaged. However, those two principles involved not only the

295. U.N. Doc. A/1901, at 3-4 (1972).

296. U.N. Doc. A/C.2/SR.1466, at 16 (prov. ed. 1972).

297. *Id.* at 13. Similar statements were made by representatives of Argentina, *id.* at 17; Pakistan, U.N. Doc. A/C.2/SR.1467, at 6 (prov. ed. 1972); Sri Lanka, A/C.2/SR.1469, at 2-3 (prov. ed. 1972); Venezuela, U.N. Doc. A/C.2/SR.1471, at 3 (prov. ed. 1972); Trinidad and Tobago, U.N. Doc. A/C.2/SR.1472, at 20 (prov. ed. 1972); Malaysia, U.N. Doc. A/C.2/SR.1473, at 12-13 (prov. ed. 1972); Zambia, *id.* at 14.

The proposal was also endorsed by the United States, U.N. Docs. A/C.2/SR.1467, at 3-4 (prov. ed. 1972) and A/C.2/SR.1473, at 16-17 (1972); Australia, U.N. Doc. A/C.2/SR.1468, at 11 (prov. ed. 1972); Austria, U.N. Doc. A/C.2/SR.1469, at 4 (prov. ed. 1972); Haiti, *id.* at 12; Guatemala, *id.* at 13-14; Spain, U.N. Doc. A/C.2/SR.1470, at 5 (prov. ed., 1972); Yugoslavia, *id.* at 7; Egypt, *id.*; Indonesia, *id.* at 10; Cyprus, *id.* at 22; Libya, U.N. Doc. A/C.2/SR.1471, at 2 (prov. ed. 1972); Italy, *id.*

right to exploit resources but also the responsibility not to damage others in the course of exploitation activities and to develop new laws and procedures enabling the disputes to be settled if damage did occur. Clearly, to achieve those objectives, something more than the publication of information was required. Obviously the establishment of much wider international co-operation in environmental matters must be envisaged. Those two principles formed the point of departure for the development of international environmental law. Without appropriate legislation, there could be no assurance that big and small countries could establish co-operation on an equal footing, as called for in principle 24 of the Declaration, nor that the polluters would agree to pay. Countries like Canada, which were not great Powers, must be able to rely on the law to defend their interests.²⁹⁹

In a spirit of cooperation, he offered only two "essential" amendments to paragraph 2 of the draft: that the words "including co-operation towards the implementation" of Principles 21 and 22 be replaced by "including co-operation by the implementation"; and that the words "effectively achieved" be replaced by "facilitated."³⁰⁰ The Mexican representative also objected to the draft, as it could be interpreted to mean that "the responsibility to ensure protection of the environment, embodied in principles 21 and 22, could be met by merely informing neighbouring countries," while Mexico's view was that "it was the responsibility of all States to avoid activities within their jurisdiction or control which might cause damage to the environment beyond their national frontiers and to repair any damage caused."³⁰¹ The New Zealand representative thought that the draft severely weakened Principles 21 and 22, because the words "significant harmful effects" and "significant harm" might give rise to endless debates about what was harmful and what was significant. There was also the implication that the duty to cooperate can be effectively fulfilled by merely exchanging information.³⁰² The Netherlands representative did not consider the draft satisfactory since "a State whose activities had harmful effects on the environment outside its national jurisdiction was responsible for providing the other States concerned with as much advance information as possible."³⁰³ The draft was also restricted to

299. U.N. Doc. A/E.2/SR.1469, at 14 (prov. ed. 1972).

300. *Id.* at 15; U.N. Doc. A/1901, at 4 (1972).

301. U.N. Doc. A/C.2/SR.1470, at 19 (prov. ed. 1972).

302. U.N. Doc. A/C.2/SR.1472, at 13 (prov. ed. 1972). For the statement by

harm to "adjacent areas," though damage sometimes might occur in other areas as well.³⁰⁴

After the delegates of Brazil, Argentina, and the United States made clear that the draft was not intended to derogate from, modify, weaken, or limit Principles 21 and 22,³⁰⁵ Canada agreed to withdraw her two amendments.³⁰⁶ Nevertheless, to make doubly sure, Australia, Canada, Mexico, New Zealand, and Panama introduced a supplementary resolution declaring that "no resolution adopted at the twenty-seventh session of the General Assembly can affect principles 21 and 22 of the Declaration."³⁰⁷ When it came to voting, the spirit of compromise prevailed; the first resolution was adopted by 114 votes to none, with 10 abstentions,³⁰⁸ and the supplementary resolution was accepted by 111 votes to none, with 11 abstentions.³⁰⁹

The General Assembly, having informally agreed not to examine the substance of the Declaration and not to entertain any amendments to it, did not even contemplate the possibility of adding the principle embodied in the first resolution to the Declaration. Nevertheless one might consider, for all practical purposes, that the new principle has become Principle 22A (or 22 bis, should the European nomenclature be used). It balances neatly the desire of some states to be informed in time of any activities within the territory of a state so that steps might be taken to avoid significant harm in adjacent areas, with the firm conviction of other states that such information should not be used by a state to delay or impede the development of natural resources in another state. As to whether this line can be drawn in practice, only future experience in applying this resolution will tell. Nevertheless, however vaguely stated, this principle provides the legal basis for a state which feels threatened to require the state in which a dangerous activity is conducted to provide the other state with the relevant technical data. This is certainly a step in the right direction. Like the requirement for an environmental impact statement in some national legal systems, the fact that there is a requirement to provide the technical data might result in the abandonment of some marginal projects.

304. *Id.* at 8. A similar point was made by the representative of Sri Lanka. U.N. Doc. A/C.2/SR.1469, at 2-3 (prov. ed. 1972).

305. U.N. Doc. A/C.2/SR.1473, at 15-17 (prov. ed. 1972).

306. U.N. Doc. A/C.2/SR.1479, at 5 (prov. ed. 1972).

307. U.N. Doc. A/8901, at 5, 35 (1972).

308. Most of these 10 votes were cast by socialist countries, which abstained on all resolutions relating to environment.

309. U.N. Doc. A/C.2/SR.1479, at 7, 8 (prov. ed. 1972). The final texts of the two resolutions may be found in U.N. Docs. A/RES/2995 and A/RES/2996 (1972).

Principle 23

Without prejudice to such criteria as may be agreed upon by the international community, or to standards which will have to be determined nationally, it will be essential in all cases to consider the systems of values prevailing in each country and the extent of the applicability of standards which are valid for the most advanced countries but which may be inappropriate and of unwarranted social cost for the developing countries.

Comment. The idea that each people is entitled to the preservation of its system of values, an important part of its cultural heritage and environment, appeared early in the following statement by the Holy See:

To stress the primacy which must be given to man in the consideration of either economic development or the natural environment is the only way to reconcile development with the protection of the environment. It is also the way to recognize the importance, in protecting the environment, of protecting the cultural and spiritual values which form the most valuable asset handed down by the past to the present generation, not as a dead tradition, but as a vital, ever-fertile element whose decay is one of the gravest symptoms of imbalance in a culture or civilization.³¹⁰

The other basic concept in this principle relates to the need to devise different standards for the most advanced countries and for the developing countries. It can be traced to the Pounex Report, which emphasized that each developing country must define for itself the minimum environmental standards which it wishes to impose in the light of its own stage of development and its own cultural and social objectives.³¹¹

The two ideas were combined in the following proposal presented by Chile to the Stockholm Conference:

Without prejudice to such general principles as may be agreed upon by the international community, or to the criteria and minimum levels which will have to be determined nationally, it will be essential in all cases to consider the systems of values prevailing in each country, avoiding where necessary the use of standards which are valid for the most advanced countries but which may be inappropriate and high in social cost for the developing countries.³¹²

310. U.N. Doc. A/CONF.48/PC/WG.1/CRP.4, at 39 (1971).

311. U.N. Doc. A/CONF.48/10, Annex I, at 20, 33 (1971).

312. U.N. Doc. A/CONF.48/WG.1/CRP.10 (1972).

This proposal was adopted by the Conference with minor, though significant, changes.

The final text recognizes that criteria agreed upon by the international community will have priority over national policies. In this connection, the word "criteria" is a more definite one than the words "general principles" which appeared in the Chilean draft, since a country would have a wider freedom of maneuver within the general principles than it might have within more specific criteria. On the other hand, at the next level of specificity, "standards" will be determined nationally, as will the local systems of values. Since both will be determined by the competent national authority, there should be no danger of clash between them. Nevertheless, in order to ensure that undue pressure is not put upon a country to adopt advanced international standards to the detriment of cultural values and at unwarranted social cost, Principle 23 contains the injunction to consider carefully whether certain environmental standards which might be valid for industrialized countries are appropriate for a particular developing country.

Principle 24

International matters concerning the protection and improvement of the environment should be handled in a co-operative spirit by all countries, big or small, on an equal footing. Co-operation through multilateral or bilateral arrangements or other appropriate means is essential to effectively control, prevent, reduce and eliminate adverse environmental effects resulting from activities conducted in all spheres, in such a way that due account is taken of the sovereignty and interests of all States.

Comment. Most of the early proposals related to the second sentence of this principle; the first one was added at the last minute in response to a Chinese suggestion.

In his questionnaire the Secretary-General pointed out that "the interdependence and the regional or global character of a growing number of environmental problems calls for a concentrated effort towards their solution by all members of the international community, regardless of their geographical, economic, and social situation, or their political systems."³¹⁴ He also suggested that "States should be guided by the principle of co-operation and mutual assistance and should conduct all their activities related to environmental problems

with due regard to the corresponding interests of other States, in accordance with international law, including the Charter of the United Nations."³¹⁵ Similarly, the United States suggested that "actions necessary for the conservation, and the enhancement of the human environment will require sustained co-operation by States, peoples, and international organizations."³¹⁶

The Working Group of the Preparatory Committee included in its first draft the principle that:

States shall, in accordance with the Charter of the United Nations, take joint and separate action, both directly and through international organizations, to preserve and enhance the human environment.³¹⁷

Sweden suggested that this proposal be reworded to read:

Co-operation bilaterally, regionally or internationally must be undertaken by states, whenever separate and unco-ordinated national measures appear inadequate, to avoid or eliminate threats to the environment.³¹⁸

A joint proposal by Brazil, Egypt, and Yugoslavia emphasized the need to "co-operate in the international field so as to prevent, eliminate or at least adequately reduce and effectively control adverse ecological effects resulting from activities conducted in all spheres and in such a way that due account is taken of the interests of all States."³¹⁹ As revised later, in cooperation with Costa Rica and Zambia,³²⁰ and as restyled by the Working Group, this proposal was forwarded to Stockholm in the following form:

Co-operation through international agreements or otherwise is

³¹⁴ *Id.* at 14. This suggestion was endorsed by Colombia, *id.* at 26; Denmark, *id.* at 29; and Switzerland, *id.* at 58.

³¹⁵ *Id.* at 64.

³¹⁶ U.N. Doc. A/CONF.48/PC.12, Annex I, at 3 (1972). It was also suggested that the beginning of the paragraph be revised to read: "States shall cooperate . . . by taking joint and separate action." *Id.*, Annex II, at 10. For another slight variant of this proposal see U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.5, para. 18, at 3 (1972) (the Netherlands draft).

³¹⁷ U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.2, at 4 (1971). See also U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.6, para. 10, at 3 (1972) (the Indian proposal). Similarly, Canada suggested that:

³¹⁸ States should co-operate with other States bilaterally, regionally or internationally to avoid or eliminate threats to the environment whenever separate and unco-ordinated national measures appear inadequate.

essential to prevent, eliminate or reduce and effectively control adverse environmental effects resulting from activities conducted in all spheres, in such a way that due account is taken of the interests of all States.³²⁰

At Stockholm a reference to "sovereignty" was added near the end of the paragraph; it was made explicit that states may cooperate through both multilateral and bilateral agreements; "or otherwise" was replaced by the more elegant "or other appropriate means"; the order of the goals was reversed; and a sentence was added, reflecting the following Chinese amendment:

International matters regarding the protection and improvement of the environment should be handled in the spirit of all countries, big or small, on an equal footing, and with the fullest mutual consultations possible.³²¹

When the Chinese proposal was revised, the phrase "the fullest mutual consultations possible" was dropped. The change reflected the bitter battle fought on the subject in connection with the so-called "Principle 20."³²² China did not succeed in slipping the idea inconspicuously through the back door of Principle 24.

In its final form the principle emphasizes not only cooperation but also equality among states, and the need to respect the sovereignty and interests of all states, not only of the parties to a particular arrangement. It should have been possible to phrase this principle in the form of a state duty, as was done with respect to the next principle, but Principle 24 was probably considered too complicated to be added to the few specific duties clearly imposed by the Declaration.

Principle 25

States shall ensure that international organizations play a coordinated, efficient and dynamic role for the protection and improvement of the environment.

Comment. The problem of coordination — a favorite one in United Nations circles — took a prominent place in the work of the committees working on institutional arrangements for the protection of the human environment, which culminated in the adoption of a

320. U.N. Doc. A/CONF.48/4, Annex, at 5 (1972).

321. U.N. Doc. A/CONF.48/WG.1/CRP.23, at 4 (1972).

322. For a discussion of that principle see Comment on Principle 22, pp. 496-502 *supra*.

separate resolution on institutional arrangements.³²³ The Working Group of the Preparatory Committee in its first draft proposed that:

States shall direct their activities within international organizations so as to ensure that these organizations perform an increasingly effective role in the preservation and enhancement of the human environment.³²⁴

Some delegations objected to this proposal because "it dictated policies to sovereign States" and "it reflected a tendency to place undue emphasis on policies of the environment to the detriment of the specific purposes for which the various international organizations were established."³²⁵

The Netherlands inserted in this draft a more express reference to coordination:

States shall direct their activities within international organizations so as to ensure that these organizations perform in a coordinated and concerted manner an increasingly effective role in the enhancement and preservation of the human environment.³²⁶

The Working Group simplified this proposal and sent it to the Stockholm Conference in the following form:

States shall ensure that international organizations play a coordinated, efficient and dynamic role for the protection and enhancement of the environment.³²⁷

This proposal was accepted by the Stockholm Conference, with only a small drafting change.³²⁸

It is encouraging that this principle is at least stated in a strong, positive form, imposing a clear obligation on states. It is based on the sound notion that the best method of coordination is for states to instruct their delegates to various international organizations to act in accordance with certain agreed goals, such as the protection of the environment. Unfortunately, it happens too often that the delegates of the

323. U.N. Doc. A/CONF.48/14, at 61, 64-65 (1972). The proposals embodied in this resolution, with only one modification, were included in G.A. Res. 2997, Dec. 19, 1972, U.N. Doc. A/RES/2997, at 6-7 (1973).

324. U.N. Doc. A/CONF.48/PC.12, Annex I, at 4 (1971).

325. *Id.*, Annex II, at 12.

326. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.3, at 5 (1972).

327. U.N. Doc. A/CONF.48/4, Annex, at 5 (1972).

328. It may be noted that Brazil suggested that this principle be deleted. U.N. Doc. A/CONF.48/WG.1/CRP.6 (1972). China suggested the addition of a sentence, which, however, was inserted instead in Principle 24. U.N. Doc. A/CONF.48/WG.1/CRP.23, at 3-4 (1972).

same state to different organizations take conflicting positions, and that there seems to be no effective coordination on the national level, inasmuch as the delegates to various international organizations represent different ministries. The power of the Foreign Ministry in many governments is not strong enough to provide sufficient guidance to relatively independent delegates, especially since in some cases the delegates are the only experts on the subject which the country possesses. Nevertheless it may be hoped that this strong injunction in Principle 25 will prove to be an effective weapon in the hands of national coordinators of environmental policy to ensure dynamic coordination at least in the field of environmental protection.

Principle 26

Man and his environment must be spared the effects of nuclear weapons and all other means of mass destruction. States must strive to reach prompt agreement, in the relevant international organs, on the elimination and complete destruction of such weapons.

Comment. The United Nations has long been concerned with the question of the elimination of the weapons of mass destruction. Many proposals were also made to prohibit their use, and as a minimum to prohibit their testing, with the resultant contamination of the atmosphere.³²⁹

It was fitting that Japan, the victim of the first use of nuclear weapons, should propose the insertion in the Declaration of a provision urging "every State possessing nuclear and thermonuclear weapons to put an end to the testing of such weapons in all spheres in order to prevent further deterioration of human environment on a global scale."³³⁰ Later Japan proposed a much broader text:

The testing and use of nuclear weapons and other weapons of mass destruction should be ended as early as possible in all environments in order to prevent further deterioration of the human environment on a global scale.³³¹

Another proposal, by Brazil, Egypt, and Yugoslavia stressed the

329. For a detailed story of the various proposals, negotiations, and agreements see UNITED NATIONS DEPARTMENT OF POLITICAL AND SECURITY COUNCIL AFFAIRS, *THE UNITED NATIONS AND DISARMAMENT, 1945-1970* (U.N. Publ. 70.IX.1, 1970). In particular, with respect to the discontinuance of nuclear weapon tests see *id.* at 101, 151.

need to "end the testing of nuclear weapons in all spheres and, also in the context of measures designed to improve environmental conditions on a world-wide basis, to prohibit the production and use of nuclear, chemical and biological weapons and to ensure their early destruction."³³² In a joint proposal with Costa Rica and Zambia, they suggested more precisely the bringing about of "the co-operation through international agreements or otherwise, that is essential in order to prevent, eliminate or reduce and effectively control adverse environmental effects resulting from activities conducted in all spheres, in such a way that due account is taken of the interests of all States."³³³ The Working Group distilled from all these proposals, and forwarded to the Stockholm Conference, the following pithy statement:

Man and his environment must be spared the serious effects of further testing or use in hostilities of weapons, particularly those of mass destruction.³³⁴

At Stockholm, the United States made an effort to put this proposal into a wider framework, suggesting that:

- States must intensify efforts to maintain international peace and security so that man and his environment can be spared any serious effects of testing and use in hostilities of weapons, particularly those of mass destruction.³³⁵

Tanzania would have added a sentence condemning "the use of chemical and biological agents in wars of aggression which degrade man and his environment,"³³⁶ thus condemning the use of such weapons as herbicides.³³⁷ Peru, having in mind the French nuclear tests in the Pacific as well as the Chinese tests, which were condemned by a separate resolution of the Conference,³³⁸ proposed the addition of a sentence prohibiting outright "nuclear tests for military purposes."³³⁹

332. U.N. Doc. A/CONF.48/PC/WG.1(II)/CRP.3/Rev.3, at 4 (1972).

333. *Id.*, Rev.4, at 5 (1972).

334. U.N. Doc. A/CONF.48/4, Annex, at 5 (1972).

335. U.N. Doc. A/CONF.48/WG.1/CRP.4 (1972).

336. U.N. Doc. A/CONF.48/WG.1/CRP.8 (1972). This proposal was endorsed by a group of African countries. U.N. Doc. A/CONF.48/WG.1/CRP.20 (1972); *id.*, CRP.22, at 3 (1972).

337. For a discussion of the herbicide issue see *Hearings on Preparations for and Progress of the June 1972, U.N. Conference on the Human Environment Before the Senate Committee on Foreign Relations*, 93d Cong., 2d Sess., 34-37 (1972).

338. U.N. Doc. A/CONF.48/14, at 66-67 (1972).

339. U.N. Doc. A/CONF.48/CRP.6/Rev.1 (1972). When Japan and New Zealand

China, while defending her right to conduct nuclear tests in the atmosphere in self-defense against the superpowers which were stepping up the arms race, repeated her pledge not to be first to use nuclear weapons.³⁴⁰ She proposed, accordingly, the following text:

In order to protect mankind and the human environment, it is imperative to firmly prohibit the use of and thoroughly destroy the inhuman biological and chemical weapons which seriously pollute and damage the environment; to completely prohibit and thoroughly destroy nuclear weapons and, as the first step, to reach an agreement by the nuclear states on the non-use of nuclear weapons at no time and under no circumstances.³⁴¹

The Working Group was unable to reach a consensus, but forwarded a text to the plenary Conference which the Conference approved subject to the observations and reservations made by various States.³⁴² During the plenary session complaints were made that the text was unsatisfactory as it did not refer explicitly to biological and chemical weapons, and did not give priority to an agreement on non-use of nuclear weapons.³⁴³ Japan stated for the record her interpretation that "principle 26 as approved definitely implied prohibition of testing of nuclear weapons since dangers to the human environment arose particularly from atmospheric testing."³⁴⁴ The United States also presented an interpretative statement emphasizing the close link between prohibitions and adequate international controls:

The United States of America fully supports the purpose, aspirations, and ultimate goals contained in this paragraph. We are constantly striving to meet such goals in all relevant fora including for example SALT, which has recently achieved such success. We regard our commitment under this principle as identical to the treaty obligation we have assumed in connexion with the Treaty on the Non-Proliferation of Nuclear Weapons, specifically article VI, including the requirement of "strict and effective international control." We believe it obvious that agreements called for in the principle must be adequately verifiable or they will not be soundly

abandon their plans to carry out such tests as they may lead to further contamination of the environment.

U.N. Doc. A/CONF.48/CRP.6/Rev. 2 and Corr. 1 (1972).

340. U.N. Doc. A/CONF.48/14, at 107 (1972).

341. U.N. Doc. A/CONF.48/WG.1/CRP.23, at 3 (1972); U.N. Doc. A/CONF.48/14, at 114 (1972).

342. U.N. Doc. A/CONF.48/14, at 119; *id.*, Annex II, at 1 (1972).

343. Comments by Tanzania, China, Egypt, and Sweden. U.N. Doc. A/CONF.48/14, at 113-17 (1972).

344. *Id.* at 117.

enough based to achieve the purposes of this principle

The final text is limited to nuclear weapons and other weapons of mass destruction, a category which usually includes chemical and biological weapons. Any large scale use of such weapons can result not only in the destruction of the two opponents but also in such contamination of the biosphere that only small remnants of mankind might be able to survive in a few corners of the world. While the environmental crisis has made the world conscious of the possibility of a rapid deterioration of environment which would make life difficult and after a while even impossible, a nuclear war can bring about such deterioration instantly. Though nuclear weapons are needed at this point as a deterrent against precipitous action by one of the nuclear powers, their actual use would be an unmitigated disaster not only to the people of the nuclear powers directly involved, but also to all innocent bystanders in other countries. Understanding this well, several of the smaller countries have been pushing for years for the elimination of nuclear weapons. The nuclear powers are deadlocked, however, on the issue of the extent of controls needed to prevent a circumventing of a ban on the possession and production of nuclear weapons, and only a few peripheral agreements have been reached. Principle 26 has added another exhortation that prompt agreement be reached on such a ban, but this exhortation has little meaning without some ingenious suggestion as to how to break the existing deadlock on controls. If success is reached in controlling other environmental hazards, a new incentive would be added to dealing more effectively with weapons of mass destruction.

THE EFFECT OF THE DECLARATION

While the necessarily foreshortened history of the Declaration presented in the previous section cannot provide a clear picture of all the

345. *Id.* at 118. Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons, July 1, 1968, 21 U.S.T. 483, T.I.A.S. No. 6839, cited in this statement, provides that:

Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control.

The text of the Treaty is annexed to G.A. Res. 2373, June 12, 1968, 23 U.N. GAOR, Supp. 16A (Doc. A/6716/Add.1) at 5-7 (1968). For a comment on the United States position at Stockholm on arms control issues see Langway and Edgerton, *The U.S. at Stockholm*, 215 *NATION*, July 10, 1972, at 7. See also Wijkman, *Second-best Solution at Stockholm*, 9 *INTERECONOMICS* 262 (1972).

spirited debates that took place, it may be hoped that it helps to explain some of the reasons for the final form and content of the document. Though several preliminary drafts were based on certain guidelines as to the sequence of provisions and the form in which they should be drafted, the text finally patched together from bits and pieces of various drafts does not show any real coherence of form or any uniform way of treating the substance.

When the Working Group of the Preparatory Committee sent its draft to the Committee, it made it clear that the order in which the paragraphs appear in the draft was provisional only;³⁴⁸ nevertheless, the sequence of its draft was closely followed in the final text, with only minor departures. This sequence is not completely haphazard. Starting with a general provision relating to fundamental human rights, the Declaration proceeds to deal first with the management of earth resources and the threat of pollution which brought the whole subject to public attention. The next part of the Declaration considers the relationship between development and environment, the main area of confrontation between the industrialized and the developing countries. A section on planning and environmental policies incorporates also the main provision relating to demographic policies. Another group of provisions relates to science, technology, and education. They are followed by the pivotal principles embodying the main international duties of states with respect to the prevention of damage to the human environment and, if necessary, the payment of compensation. An article on relationship between national values and international standards introduces the section on international cooperation. The text concludes with a provision on weapons of mass destruction, the ultimate threat to the human environment.

While one could quarrel with this sequence of ideas, it would be rather difficult to come out with a different one, considering the actual content and form of the various provisions. Had it been possible to adhere to the early idea of enumerating, respectively, the rights and duties of man, states, and the international community,³⁴⁹ a logically more pleasing grouping might have been achieved. But it is quite possible that this approach, if rigidly followed, might have led to a severe duplication of parallel provisions, and confusion might have resulted. Similar fate might have befallen an attempt to distinguish relations between states from relations between states and individuals, between individuals *inter se*, between states and international

³⁴⁶ U.N. Doc. A/CONF.48/PC.16, Annex III, at 2 (1972).

organizations, and between individuals and international organizations.³⁵⁰

As far as the form is concerned, only few principles are stated in the usual obligatory "States shall" form.³⁵¹ Some use the next best "States should" phrase;³⁵² one speaks of states' rights;³⁵³ most employ the words "must" or "should" (without mentioning the word "states"), or the phrase "is essential."³⁵⁴ There is no special reason for these differences, but it is obvious that the draftsmen were reluctant to couch all principles in the form of clear duties of states. This was due to some extent to the inherent differences among them as to the import and effect of the various principles. Even those states which were very anxious to include a definite obligation concerning certain subjects, vehemently opposed doing it with respect to others. In several cases the situation was reversed, and the opponents of a strict rule on a previous occasion suddenly became strong supporters of a binding obligation in respect of a topic dear to them. The necessary compromises resulted in an inconsistency of formulas and the constant shifting from one approach to another.

Taking the document as a whole, one is nevertheless surprised that despite the generality of some provisions and their uncertain phrasing the general tone is one of a strong sense of dedication to the idea of trying to establish the basic rules of international environmental law.³⁵⁵ The development of the new notion that international law should no longer be purely an interstate system but should bring both individuals and international organizations into the picture, and the impact of the other modern idea—that international law should have more social content and should become an instrument of distributive justice—have led to a new way of expressing the basic rules of international law. They need no longer be formulated merely in the form of declarations of rights and duties of states, but can use other, different formulations, conveying the feeling of the international community that the time has come to attend to certain common tasks

³⁴⁸ *Id.* at 3-4.

³⁴⁹ Principles 7, 22, and 25.

³⁵⁰ Principles 11, 23, and 24.

³⁵¹ Principle 21.

³⁵² Principles 1-6, 8, 10, 12, 24-26, 23, 24, and 26.

³⁵³ The United States report on the Stockholm Conference, prepared by the Office of Environmental Affairs of the Department of State, notes that the Declaration, although less balanced than the Working Group draft and less clearly focused on environmental concerns, "preserves a number of extremely important principles of conduct for states in dealing with environmental problems of international significance." It cites in this

through common means and in accordance with generally agreed guidelines. While the authors of the Declaration faced several old-fashioned battles about nuances in language, and while some of the states were afraid that they might be tricked into assuming broader obligations than they were ready for, the final result was achieved through a consensus on the urgent need for a Declaration, however imperfect in theory or unsatisfactory in certain details. It is the broad consensus on the central objective that really matters. Since states have become serious about the need to protect and improve the human environment, their representatives could not return home with empty hands. They had to reach an agreement on the basic principles and on the spirit in which that agreement has to be interpreted and applied.

While some reports from Stockholm, in usual journalistic fashion, concentrated on disagreements and difficulties, blowing up bits of information gained in the corridors,³⁵⁴ the true story of Stockholm should point out the fact that representatives of so many states were able to find their way through this uncharted sea and to bequeath to their successors a chart which should help them to reach the goal in a more expeditious manner.

Diplomats and international lawyers are not yet used to this new method of parliamentary diplomacy, through which decisions are made and documents are approved in much more informal ways than in days of parchments, red wax and elaborate seals. Now that they have at their disposal instantaneous means of communication and no longer need rely on easily outmoded prior instructions, modern state representatives at international assemblies can, and in fact do, reach final agreements in less solemn form than their predecessors did. When need arises, they are able to create instantaneous international law through the adoption by universal consensus of declarations establishing new principles for areas previously ungoverned by any agreed rules. This is not, however, an automatic, general process applicable to all types of situations. It requires the conjunction of an urgent topic, a propitious international climate, adequate preparation, and a dedicated group of well-qualified people intent on achieving a meaningful result. Such combination of events, circumstances, and people does not happen often, but once it occurs the results usually exceed the early expectations of some of the originators of the idea.

When the Universal Declaration of Human Rights was adopted in

354. See, e.g., Lamberg, *Can Stockholm Succeed*, 176 *SCIENCE* 749 (1972); Woodstockholm, *TIME*, Jun. 19, 1972, at 55.

1948,³⁵⁵ several of its draftsmen emphasized that it was merely to be merely a hortatory document, while only a few brave souls were willing to accept its binding force.³⁵⁶ But twenty years later all the doubts were dispelled and the Teheran Conference unanimously proclaimed that the Universal Declaration "states a common understanding of the peoples of the world concerning the inalienable and inviolable rights of all members of the human family and constitutes an obligation for the members of the international community."³⁵⁷ Similarly, despite the statements by some of the conservative participants in the drafting of the Stockholm Conference that this document is not a binding legal instrument, it is quite likely that in the not too distant future a more enlightened view of the nature and stature of the Stockholm Declaration will be accepted.

The force of the Universal Declaration of Human Rights was derived by some from the fact that it was a universally accepted interpretation of the scope of the term "human rights" in the Charter of the United Nations. One might also consider—as did the delegate of Kenya in the General Assembly—that the 26 principles of the Stockholm Declaration were "common convictions" which "reinforced the Principles and Purposes of the Charter of the United Nations," and that, together with the Universal Declaration of Human Rights and the International Strategy for the Second Development Decade, they "collectively create a new atmosphere for international co-operation."³⁵⁸ In the new ambience of international relations thus established, this first step toward the establishment of international environmental law on a firm foundation might prove to be more decisive than originally anticipated. Having accepted the responsibility for the preservation and improvement of the human environment, the international community will find in the Stockholm Declaration a source of strength for later, more specific action.

355. For the text see G.A. Res. 217A, Dec. 10, 1948, 3 U.N. GAOR, Part I, Resolutions (Doc. A/810) at 71 (1949).

356. For a summary of the discussion see Sohn, *A Short History of United Nations Documents on Human Rights*, in COMMISSION TO STUDY THE ORGANIZATION OF PEACE, THE UNITED NATIONS AND HUMAN RIGHTS: EIGHTEENTH REPORT OF THE COMMISSION 60-72 (1968).

357. FINAL ACT OF THE INTERNATIONAL CONFERENCE ON HUMAN RIGHTS, TEHRAN, 1968, U.N. Doc. A/CONF.32/41, at 4 (1968). But see U.S. DEP'T OF STATE, *SAFEGUARDING OUR WORLD ENVIRONMENT: THE U.N. CONFERENCE ON THE HUMAN ENVIRONMENT* 25 (Dep't of State Publ. 8630, 1972).

358. U.N. Doc. A/C.2/SR.1469, at 6 (prov. ed. 1972).

**IN OUR HANDS
EARTH SUMMIT '92**

**FROM STOCKHOLM TO RIO:
A JOURNEY DOWN A GENERATION**

By Maurice F. Strong



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«The Earth Summit must establish a whole new basis for relations between rich and poor, North and South, including a concerted attack on poverty as a central priority for the 21st Century. This is now as imperative in terms of our environmental security as it is on moral and humanitarian grounds. We owe at least this much to future generations, from whom we have borrowed a fragile planet called Earth.»

MAURICE F. STRONG

Secretary-General

United Nations Conference on Environment and Development



**IN OUR HANDS
EARTH SUMMIT '92**

On a beautiful spring morning in Stockholm nearly 20 years ago, the world community embarked on an extraordinary journey of hope. It is now almost a generation later, and world leaders and people from virtually every country will be meeting in Rio de Janeiro in June 1992 to ensure fulfillment of that hope.

In this essay, I propose to tell the story of that journey--about what it has meant to those of us who were present in Stockholm that morning, and what our experience may illustrate for future generations who will inherit this terribly fragile planet that is known as Earth.

The journey began on 5 June 1972 when delegates from 113 countries and many organizations, and people from all parts of the world, gathered in the Stockholm Opera House to be welcomed to the United Nations Conference on the Human Environment by their Swedish hosts. King Gustaf VI Adolf was present. So was the late Prime Minister Olof Palme. It was a historic moment--marking the first time ever that representatives of world governments had come together to consider the implications of deepening environmental degradation for the future of our fragile planet. It had taken more than two years of intensive effort to prepare for the Stockholm Conference. There had never been such a parley on a subject--environment--that was regarded as relatively novel. We had expected a lively conference, of course, but had little idea of just how lively it would prove to be. It soon became evident during the first round of plenary statements that participating governments were deeply divided on some of the most important issues. The Conference newspaper summed it up well in its

headline, "Only One Hundred and Thirteen Earths."

Developing countries, led by Brazil, insisted that the primary source of their environmental problems were poverty and

The deterioration of the global environment meant setbacks for both rich and poor.

under-development. They asserted that environmental concerns must not be allowed to detract from their principal priority of development. As the late Prime Minister Indira Gandhi of India put it, "Poverty is the greatest polluter."

By the final days of the Conference, however, consensus was reached on an historic Declaration and Action Plan which established the basis for a new era of international environmental cooperation. This consensus involved intense negotiations between government representatives and United Nations officials, including me. Divisive though the issues were, participants worked long and hard to reconcile their differences.

Results of the Stockholm Conference

In the event, the Conference was a success. The environment was inscribed firmly and irrevocably on the world's agenda as a result of the Stockholm Conference. Coverage of the Conference in the global media was extensive, and many articles in prestigious journals--and many books--were published in the months and years following the meeting.

The Stockholm Conference secured its place in the history of our times with the adoption of the first global action plan for the environment. In 109 recommendations for national and international action containing more than 150 separate proposals, the Stockholm Action Plan provided the basis for a standard agenda and a common policy framework to deal with the first generation of environmental action. A declaration of principles was adopted which provided the foundation for the development of international environmental law during the 1970s and 1980s.

The Stockholm Conference led to the creation of the United Nations Environment Programme (UNEP) as the global instrument for carrying out the consensus

I hope that the Earth Summit will produce a new political commitment to a global war on poverty...

reached at the meeting. Fittingly, UNEP adopted the Conference theme "Only One Earth" as its motto. I was honored to be appointed as UNEP's first Executive Director.

In time, the Stockholm Conference produced a proliferation of new initiatives. UNEP, thanks primarily to the dynamic and enlightened leadership of its current Executive Director, Mostafa K. Tolba, led the way. Governments established environmental ministries or agencies, and enacted environmental legislation and regulations. Inter-governmental

organizations incorporated "environment" in their programs. A host of new non-governmental organizations and citizen groups sprang up in all parts of the world. Business began to take environmental issues more seriously, and public awareness and concern broadened and deepened regarding environmental issues.

Nevertheless, the global environmental crisis continued. Economic growth and wealth in industrialized countries—contrasting with burgeoning population growth and poverty in developing countries—exacerbated the gross economic and social imbalances afflicting our global community. The deterioration of the global environment meant setbacks for both rich and poor. Air and water pollution problems, and the cancerous spread of urban poverty and blight made many developing-country cities the most polluted of the world's urban environments. Water contamination, impending shortages of supply and rising tides of toxic substances have been added to degradation of the renewable resources, loss of soil, forest cover and important species of plant and animal life.

The Brundtland Commission

The recognition of the essential linkages between environment and development was a dominant theme of the Stockholm Conference of 1972. But all too little progress was made toward the actual integration of the environmental dimension into development policies and practices until the World Commission on Environment and Development, in its 1987 report, *Our Common Future*, gave new impetus to this process. The commission, which was chaired by Mrs. Gro Harlem Brundtland, the Norwegian prime

minister, soon became known widely as the Brundtland Commission.

The commission's report documented in compelling terms the case for sustainable development—the full integration of environment and development—as the only sound and viable means of ensuring both our environment and development future. It made clear that the transition to sustainable

The Earth Summit in Rio will be about environment and development.

development is equally imperative for developing as for more industrialized countries, while the vastly different conditions under which they must make this transition impose special handicaps on the poor and special responsibilities on the rich.

The 1992 Earth Summit

The United Nations General Assembly, responding to the report of the Brundtland Commission, decided in December 1989 to hold a new conference, this time on environment and development, on the 20th Anniversary of the Stockholm Conference in June 1992. It accepted the invitation of Brazil to host the Conference, and President Fernando Collor de Mello decided that it would be held in Rio de Janeiro. The General Assembly decided to establish a Preparatory Committee to oversee efforts for the 1992 Rio Conference. The broad goals of the Earth Summit have been articulated in General Assembly Resolution 44/228, and the task before the Preparatory

Committee is to recommend the programs and the actions required to reach these goals. Ambassador Tommy Koh of Singapore was elected chairman of the Committee at its organizational meeting in New York in March 1990.

In December 1990, the General Assembly decided that countries would be represented at the Conference by their Heads of State or Government. And the people of the planet who constitute the base on which this Summit depends will be there too—represented by the broad range of non-governmental organizations and citizen groups that will be participating. The expectation is that the presence of leaders, and representatives of the people they serve, will generate the kind of political will required to take bold decisions concerning mankind's future.

The recommendations of the Brundtland Commission provide the primary basis for the agenda of the United Nations Conference on Environment and Development. I hope that the 1992 Earth Summit will produce a new political commitment to a global war on poverty as a central priority of the world community in the remainder of the 1990s and into the 21st Century.

The Earth Summit in Rio will be about environment and development. But there is a primary emphasis on development and economic change. For it is through the development process that we impact on the environment and only through fundamental changes in our economic behavior, in lifestyles and in management of the development process that we can effect the positive synthesis between the environment and development that will produce a way of

life that is sustainable both in economic and environmental terms.

The development model which has produced the lifestyles that we in the industrialized world and the privileged minority in developing countries, enjoy is simply not sustainable. The 1992 Conference will focus largely on the changes we must make in our economic behavior to ensure global environmental security. Preparations for the Conference will define the concrete measures to effect this transition to sustainability in our economic life.

The industrialized countries must clearly take the lead in this transition. It is they who have developed and benefitted from the traditional development model which has produced our present dilemma. And they are the only ones with the means and the power to change it.

The transition to sustainability requires much more effective use of resources and accountability for the environmental as well as the economic impacts of such use. This must depend primarily on the provision of the necessary incentives to change rather than over-reliance on regulatory measures. Operation of market forces can and must be a powerful ally in providing the incentives to change. It is, after all, fully consistent with market economy principles that every economic transaction and product must absorb the full costs to which it gives rise, including environmental costs. The system of incentives and penalties through which governments create the conditions that motivate our economic life must be re-examined and reoriented to provide the necessary incentives for the transition to sustainability in both our industrial life and individual behavior.

An Eco-Industrial Revolution?

What is called for is nothing less than a new "eco-industrial" revolution, one that will not only preserve and extend the benefits created by the industrial revolution, but create a whole new generation of economic opportunity and redress the gross imbalances between rich and poor which are as incompatible with sustainable development as they are with justice and equity.

The substantial reductions effected recently in the material and energy content of industrial production, particularly in Western Europe and Japan, illustrate the degree to which environmental measures can be compatible with economic vitality.

The 1992 Conference will focus largely on the changes we must make in our economic behavior to ensure global environmental security.

Japan, for example, uses only about half as much energy per unit of industrial production as the United States. This gives it a competitive advantage averaging some 5 percent in the US market. And such environmentally related industries as waste management and pollution control are now among the leading growth industries.

These changes within industrialized economies must be accompanied by concrete measures to ensure an increased net flow of resources to developing countries and to make available to them on

an affordable basis the environmentally sound technologies they will require to incorporate the environmental dimension into their own development policies and practices.

Changes in science and technology have provided the primary basis for the vast acceleration of human impacts on the environment and resources of the Earth. These impacts have given rise to our present dilemma and therefore must also guide our response of these challenges. UNCED recognizes the importance of scientific evidence in determining the real nature and sources of global risks and finding the response to them. The need to strengthen science is expected to be recognized in the decisions taken in Rio in June 1992. The International Council of Scientific Unions, with its extensive constituency of scientific organizations throughout the world, acts as the principal scientific adviser to the UNCED Secretariat. A number of scientific conferences and events such as the ASCEND Conference in

What is called for is nothing less than a new "eco-industrial" revolution.

Vienna, are taking place with UNCED cooperation. UNCED also recognizes that the levels of research relating to preparation for the Earth Summit and the dissemination and implementation of its results will be significant—as will be the need for improving the mechanisms by which science makes available its advice and guidance to policy- and decision-makers as well as to the

general public.

"Capacity-building"

Improving upon the strengths of the developing countries and reducing their vulnerabilities requires a quantum increase in support for the development of their human resources and related institutional capacities, particularly in the fields of science, technology, management and professional skills. At present, developing countries are especially disadvantaged in this regard. They lack access to the financial resources and technologies they require to revitalize their economies while making the transition to sustainability. An acute shortage of sufficient scientific, technological and professional capacity impairs the ability of developing countries to evaluate their own development options, and to formulate and implement the policies required to give effect to them.

Traditional patterns of technical assistance which often deepen dependence on foreign experts are simply not adequate. What is needed is a sustained commitment to building indigenous human and institutional capacity. The key to self-reliance is to foster a pool of indigenous talent that can adapt and innovate, in a world where knowledge is the primary basis of competitiveness.

Closely linked to the issue of capacity building is that of access to technology. The access to—and application of, environmentally sound technologies—can contribute significantly to raising the productivity and sustainability of resources in such areas as agricultural production, energy efficiency, renewable energy generation and pollution control. In addition to these evident environmental advantages,

such measures protect and promote development. Technology is an indispensable ingredient of economic growth, and without economic growth, developing countries have inadequate capital to support environmental protection.

Coupled with the need to increase capacity to develop their own technologies, the transition to sustainable development requires that developing countries have access to the best technologies available

Technology is an indispensable ingredient of economic growth, and without economic growth, developing countries have inadequate capital to support environmental protection.

from elsewhere. The cost of these can be a major constraint on their availability, but even more constraining is the lack of adequate institutional and professional capacities to choose and use technologies best suited to their needs in a sustainable manner. In the past, technology transfer has often been "supply led," often taking little account of local technologies and knowledge.

The emphasis should now be on technology cooperation in which externally developed technologies are adapted to local conditions and needs and are integrated with traditional technologies and experience. Most developing countries are unable themselves to provide the resources necessary to establish networks to access information from within their own country as well as from external sources, on the

range of technologies available and the experience of others in using them. Provision of resources to strengthen their own institutional and professional capacities would help stem the loss of personnel abroad. These professionals and experts, who may find more attractive opportunities outside their own countries would see new incentives to stay.

Renewed Role of the United Nations

The imperatives of global environmental cooperation will require a vast strengthening of the multilateral system, including the United Nations. Its current inadequacies, its lack of the capacity and means in many cases to do its job, are largely a function of the severe constraints imposed on both its mandates and its budgets by Member States. Yet the world needs the United Nations today more than ever. If it did not exist, it would have to be invented.

And the same difficulties that make governments reluctant to accord to the United Nations the powers and resources required to do its work would make it difficult to re-create. That is not to say that the United Nations can or should do it all. Indeed, in virtually all cases the principal actors are national governments and other inter-governmental organizations and the private sector. But the United Nations' role is unique and indispensable in providing the global framework, context and forums required to enable the other actors to contribute effectively and cooperatively to addressing common global concerns.

This will require serious examination of the need to extend into the international arena the rule of law and the principle of taxation to finance agreed actions which provide the

basis for governance at the national level. But this will not come about easily. Resistance to such changes is deeply entrenched. They will come about not through the embrace of the ideologies or theories of world government, but as a pragmatic response to compelling imperatives and the inadequacies of alternatives.

The concept of national sovereignty has been an immutable, indeed sacred, principle of international relations. There is no need for a renunciation or wholesale retreat from this principle. What is needed is recognition of the reality that in so many fields, and this is particularly true of environmental issues, it is simply not feasible for sovereignty to be exercised unilaterally by individual nation-states, however powerful. Global environmental and economic security require global cooperation.

Interdependence and Globalization

The increasingly integrated and interdependent nature of the human systems we have established through the functioning of the world economy and global communications also transcends national boundaries.

It is an interesting paradox that the globalization and universalization we are now experiencing in so many aspects of our life is accompanied by the resurgence of parochialism and ethnic and religious nationalism. This is creating strong and growing pressures for separatism in federal and multi-ethnic states.

The processes of democratization which are re-shaping the political life of so many nations today are producing a new emphasis

on individual rights and responsibilities. This is particularly manifest in respect of environmental issues ranging from consumer preferences and demands for cleaner and safer products to resistance to mega-development projects.

Environment and development issues are moving to the grass roots in a growing number of countries. There is a proliferation of new citizen groups and voluntary organizations which are becoming more important agents of action as well as sources of political pressure. They are insisting on greater participation in the decisions which affect them and for more effective accountability of the decisions and actions by governments.

Interdependence is not an unmitigated blessing, particularly when it serves to

... redress the gross imbalances between rich and poor which are as incompatible with sustainable development as they are with justice and equity.

exacerbate the vulnerability of the weak and increase their dependence on events they cannot control. The international economic environment has clearly contributed to the gross imbalances between North and South that have weakened the economies of developing countries during the past decade. These imbalances continue to present a primary barrier to the revitalization of the economies of these countries and to their prospects for effecting the transition to sustainable development.

Sustainable development cannot be imposed by external pressures; it must be rooted in the culture, the values, the interests and the priorities of the people concerned. While the transition to sustainability will require a supportive international economic environment, it must not provide a basis for external imposition of new conditions or constraints on development. Developing countries cannot be denied their right to grow, nor to choose their own pathways to growth. Nor should that right be constrained by new conditions on financial flows or trade imposed in the name of environment. But their transition to sustainability cannot be expected without the support of the international community. This is particularly needed to reverse the outflow of resources that has stifled the economic growth of the developing countries. Developing countries must have access on a long-term basis to the resource flows they will need to revitalize their economic life and make the transition to environmentally-sustainable development.

Expectations about the Rio Summit

The strong and vigorous interest which the non-governmental community is showing in

Interdependence is not an unmitigated blessing...

the 1992 Conference and in preparations for it, is an encouraging sign that "people power" will be an important factor in the success of the Earth Summit.

The Rio Conference offers a unique

opportunity to provide the basis for the major shift required to put us on the pathway to a more secure and sustainable future. At the core of this shift there will have to be fundamental changes in our economic life—a more careful and more caring use of the earth's resources and greater cooperation and equity in sharing the benefits as well as the risks of our technological civilization. Of particular importance is the need to integrate the ecological dimension into education and economics.

Population is another critical element in the environment-development equation. The relationship between population dynamics

Global environmental cooperation will require a vast strengthening of the multilateral system, including the United Nations.

and the ecosystems on which their survival and the well-being of people depend, is decisive in achieving sustainable development. Demographic factors such as rates and distribution of population growth will be key to the transition to sustainability.

Each country must determine the relationship between the growth and distribution of its own population, its environment and resource base and the level and quality of life its development policies and programs are designed to produce for its people. But overall reduction in population growth and early achievement of population stability at the global level are imperative. Equally

imperative is accelerated attention to the world's children, especially those born and raised in circumstances of economic deprivation. Children are vulnerable because they have no political or financial power, because they depend on adults for health care and food, and because their growing bodies are most susceptible to the impact of environmental degradation. Yet children cannot be seen merely as passive victims, for they are also our future. In the next century, it is they—and not the present generation of adults—who will bear the burden of responsibility for looking after the Earth, and improving the quality of the environment.

Realistic or overly ambitious?

The results we seek in Rio are clearly ambitious; some may say even unrealistic,

Developing countries cannot be denied their right to grow.

given the current economic difficulties of developing countries, the Soviet Union and other countries of Eastern and Central Europe—and the preoccupation of the OECD countries with their own economic concerns.

With the Earth Summit already on the horizon, is it really feasible to develop the

political will required to agree on the fundamental changes that are needed? Surely if our diagnosis is correct, such changes are imperative and we must believe they are also possible!

There is basis for hope in our own history

Earth is the only home we have; its fate is literally "in our hands."

which demonstrates that dramatic changes in direction are possible when necessity and new realities compel them. The world community now faces together greater risks to our common security through our impacts on the environment than from traditional military conflicts with one other. We must now forge a new "Earth Ethic" which will inspire all peoples and nations to join in a new global partnership of North, South, East and West. This partnership would ensure the integrity of the Earth as a secure, equitable and hospitable home for today's inhabitants and tomorrow's generations.

Rio 1992 will build on the foundations established in Stockholm in 1972. The people of our planet, especially our youth and the generations which follow them, will hold us accountable for what we do or fail to do at the Earth Summit in Rio. Earth is the only home we have; its fate is literally "in our hands." ■

A NOTE ABOUT MAURICE F. STRONG

Maurice Frederick Strong is Secretary-General of the 1992 United Nations Conference on Environment and Development—the Earth Summit—with the rank of Under Secretary-General of the United Nations.

During 1985 and 1986, he served as Under Secretary-General of the United Nations and Executive Coordinator of the United Nations Office for Emergency Operations in Africa, and was a member of the World Commission on Environment and Development. He is also President of the World Federation of United Nations Associations, Geneva, and Chairman of the World Economic Forum Council, Switzerland.

Born in Canada and now a resident of Geneva, Switzerland, Mr. Strong has enjoyed longstanding ties with the private and public sectors. He has received numerous international awards and honorary doctoral degrees from universities in many countries.

Mr. Strong was head of Canada's External Aid Office, administering international development assistance programs. When this organization was expanded to become the Canadian International Development Agency (CIDA), he became its President.

Mr. Strong served as the Secretary-General of the United Nations Conference on the Human Environment from November 1970 to December 1972, and subsequently became the first Executive Director of the United Nations Environment Programme (UNEP) in Nairobi, Kenya (January 1973-December 1975). He then re-joined the private sector in Canada.

Maurice Strong was born on 29 April 1929, and educated in Manitoba, Canada. He is married to the former Hanne Marstrand, and has four children, one foster child and five grandchildren.

THE EARTH SUMMIT: MEDIA MATERIAL

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Background to Institutional Options for
Management of the Global Environment
and Commons

A Preliminary Paper
for the World Federation
of United Nations Associations
Project on "Global Security
and Risk Management"

by

Peter S. Thacher

World Resources Institute

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PREFACE

Originally commissioned as a paper outlining institutional options on the basis of experience since the 1972 Stockholm Conference on the Human Environment, this paper has been adjusted to take account of the preparatory process now underway for the 1992 UN Conference on Environment and Development (UNCED) in Brazil. On the basis of UN General Assembly Resolution 44/228 of December 1989, the Preparatory Committee ("Prepcom") scheduled four substantive sessions — the first in Nairobi in August 1990, the next in March 1991 in Geneva — to prepare substantive recommendations on the sectoral agenda — such as "Atmosphere" and "Biological Diversity" — and on "cross-cutting" issues like "Technology Transfer" and "Financial Aspects", as well as institutional and legal arrangements for action by governments in 1992.

At the present stage of preparations in early 1991, cross-cutting issues are being considered in relation to recommended courses of action being drawn up for each sectoral item and since these are only tentative it would be premature to jump to conclusions about institutional arrangements at this early stage. Presumably, Prepcom will turn its attention to the institutional aspects as the other cross-cutting issues have been addressed in more detail, i.e., in each of the various sectoral areas relevant technology-transfer and other support needs can be specified; then the financial implications of actions to meet these needs can be estimated for each sector, and the results consolidated. In light of this the institutional implications of sectoral and cross-cutting action can be analyzed for incorporation in "Agenda 21" — the assembly of specific actions governments will be invited to approve in Rio.

Consequently, this paper focusses on the existing institutional situation as a background for future work by Prepcom. It is intended to be useful as a reference source for those wishing to contemplate changes in current institutional arrangements relating to issues underlying the environment-and-development agenda at UNCED. Insofar as this paper addresses "cross-cutting" issues — especially legal and financial aspects — the focus is less on substance than on their possible institutional implications.

Assuming the reader is more familiar with institutional developments in relation to development issues, especially since the Assembly's "restructuring" decisions in 1977

to reorganize its economic and social sectors, greater emphasis is given here to institutional developments flowing from the Stockholm Environment Conference of 1972.

INTRODUCTION AND SUMMARY

The recent explosion of public and political interest in global environmental issues has given rise to a new awareness of the urgent need for action to address these risks and the realization that this can only be done effectively through international cooperation on an unprecedented scale. The setting is one of dramatic change in larger dimensions verging on a "new international order" that would reflect experience and changes since the signing of the UN Charter at mid-Century. While these larger issues are not addressed in this paper, they are borne in mind, the more so given the wide variety of recent proposals, including many by heads of governments, as to how the international community might best address the issues on the agenda of the UN Conference on Environment and Development in 1992 (UNCED).

The dialogue on these issues is now well underway and engages the attention of political leaders at the highest levels. While there is widespread agreement on the importance of these issues and the need to address them expeditiously, the process of doing so has not yet advanced to the point where the kind of broad consensus required as the basis for cooperative action has yet crystallized. But the dialogue on these issues can be expected to accelerate in the period ahead and already figures prominently in preparations for the 1992 UNCED.

The purpose of this paper is to contribute to this dialogue by examining the evolution of the principal institutional arrangements for dealing with international environmental cooperation since the Stockholm UN Conference on the Human Environment in 1972, the possible need for new or additional institutional capacities, and - in a preliminary way - the principal options for meeting these needs. It focuses on institutional needs at the global level and deals with the regional, national and local levels primarily in terms of their relationships to the global context. Even in these respects it does not purport to be exhaustive. Nor should it be viewed as advocating particular institutional options, even where the text may present strong reasons for doing so.

This paper was prepared as part of the project on "Global Security and Risk Management" under the auspices of the World Federation of United Nations Associations. While preliminary in nature it is released at this time in the hope that it may be helpful as a guide and reference source for the discus-

sions now taking place in respect of these issues, especially in the UNCED Prepcom, where it should be viewed along with a number of other reports and in-depth analyses being assembled by the secretariat of the Conference.

Experience gained in preparing for the Stockholm Conference and since then is clearly relevant to the current dialogue. But it must be examined in light of the experience and the new conditions and changed circumstances and perceptions that have emerged in the intervening decades since the creation of the UN Environment Program (UNEP).

Most of the major issues of global scale now the subject of widespread attention were foreseen at Stockholm and figured in the Stockholm Action Plan that governments adopted in 1972. Eighteen years ago, at its first session in 1973, UNEP's Governing Council considered the prospect of probing the "outer limits" beyond which human impacts on the global environment and resource base might imperil the human future, and identified the possibility of man-induced climate change as one such risk, and stratospheric ozone depletion as another.

Despite significant uncertainties that continue to characterize these issues, the extent and seriousness of the risks posed to the human future are far more apparent today. Thanks in large part to progress made since Stockholm under UNEP's "Earthwatch" activities, a basis now exists on which to assess risks and the likelihood of harmful impacts, and arrive at cooperative measures for reducing them or taking precautions. Awareness of the possible impacts of climate change, loss of biological diversity, and other potential threats to the well-being of the human family is now widespread and some measures to begin to deal with these threats have been initiated. But these are only first steps in what must be a long and continuing process in which economic and social advancement and the improvement of the human condition is prerequisite. For although the world is going through a process of "global change" as measured by specialists in natural sciences, changes detected in the field of social science are often more immediate in their impact for larger numbers of people suffering conditions of poverty. Central to coping with these twin faces of global change is the need for fundamental changes in economic behavior and international economic relations, particularly those affecting relations between developing and more industrialized countries.

The difference in the perceptions and priorities of industrialized and developing countries in respect of the environment were manifest early in the process of preparing for the 1972 Stockholm Conference. Twenty years ago the principal concerns of the industrialized countries were to deal with the problems of pollution and urban blight which had resulted from the same processes of economic growth that had produced their wealth. Developing countries, on the other hand, saw their environmental problems as a direct result of poverty and under-development; they were concerned lest the new preoccupation with environment divert attention from - and impose constraints on - their economic and social development. The essential link between environment and development was recognized at a 1971 meeting convened in Founex, Switzerland, by the organizers of the Stockholm Conference that highlighted the differing perspectives of industrialized and developing countries in respect of the environment-development relationship and concluded that environmental problems result from the absence of development as well as from development itself. The chief conclusion was that environmental problems of greatest concern to developing countries could only be overcome by the process of development. In addition to reassuring them that their economic progress would not be sacrificed in the name of environmental preservation, this started the call for non-destructive economic growth.¹

This provided the basis for the high degree of consensus achieved at Stockholm and the extensive cooperation between industrialized and developing countries in the following years, much of it instigated by UNEP.

The evolving environment-development relationship led to the General Assembly's establishment in 1983 of the World Commission on Environment and Development (WCED). Its report, Our Common Future, presented to the General Assembly at its 42nd Session in 1987, elaborated the need for a positive synthesis between environment and development at all levels of economic life through a commitment to "sustainable development". It pointed up the principal institutional, economic and other implications that flow from this. And although the specific agenda and modalities for the 1992 conference are only now being determined by the Preparatory Committee and secretariat set up by the UN General Assembly in December 1989, it is clear that these issues will be a central focus of the preparatory process and a prime determinant of the success of the conference.

Most of the decisions that governments will be called upon to make at the 1992 conference will have important institutional implications. Closely related to these will be the need for new resources to fund international cooperation in respect of sustainable development and to ensure access by developing countries to the additional resources and technologies they will require to integrate the environmental dimension into their own development, and join a common effort to reduce global risks to which they are specially vulnerable. Although the portion of funds flowing through the UN system is relatively small and amounts available to multilateral agencies is modest by comparison to bilaterals, they are nonetheless significant for many countries beset by problems which make external assistance and investment vital. These funds also greatly shape the use to which other external funds will be put in the future.

Options that have been proposed for meeting these needs range from a cautious, incremental approach relying only on existing institutional mechanisms on the one hand, to proposals for entirely new organizations and new methods of international funding on the other..

The primary setting for all such proposals is the "UN system" which itself calls for clarification. As used in this paper (with deliberate, uncapitalized "system"), the term refers to organizations and programs represented on the UN Administrative Committee on Coordination (ACC) on which sit the Executive Heads of agencies which under Article 57 of the UN Charter have "relationships" with the UN according to Article 63, especially 63.2 giving ECOSOC the right (though not the power) to "coordinate" through "consultations" and "recommendations", as well as programs that are a part of the UN itself, like UNDP, UNEP and UNICEF.

As used here the term "UN system" does not however include three Bretton Woods institutions set up prior to the UN Charter: the International Bank for Reconstruction and Development (the "World Bank" consists of the International Development Association (IDA) and the International Finance Corporation (IFC)), or the International Monetary Fund (IMF), or the General Agreement on Tariffs and Trade (GATT); nor a new and important source of development funding - the International Fund for Agricultural Development (IFAD).

In common parlance each of these four organizations, although usually present in ACC meetings presided over by the UN Secretary-General, are seen as

members of the "UN family" rather than of the "UN system" for reasons that have to do with the funds they control and the manner in which decisions related to funding are taken: by weighted votes in contrast to the one-country one-vote practice prevalent throughout the UN system.¹

There are also a number of ideas as to how the capacities of non-governmental organizations (NGOs) - including scientific and business communities as well as grass-roots citizens groups - can best be mobilized to support the transition to sustainable development. But, despite the growing influence of NGOs at all scales, not only at local scales, the power to reach binding decisions that affect real financial resources or stand in international law is, and will remain for years to come, in the hands of governments and their representatives. The participation of chiefs of state and of government at the first "Earth Summit" in Brazil in June, 1992, is thus a unique opportunity to reach agreements that determine the transition to the 21st Century.

Finally, some thoughts are presented regarding the process of getting there - the preparations leading up to the 1992 conference - and of implementing the recommendations enunciated in the reports of the WCED and on the "Environmental Perspective to the Year 2000 and Beyond."

The preparatory process itself already promises to blaze new trails - to synthesize information for governments on the plans, intentions and capabilities of international organizations belonging not only to the UN system, and the Bretton Woods institutions, but intergovernmental and international non-governmental organizations as well. "Reform" of the UN system, especially in regard to services it provides in economic and social fields is hardly new. Early moves were initiated by the "Jackson Report" of 1969, the "Bertrand Reports" of 1969 and 1985, and the Assembly decision on "Restructuring the Economic and Social Sectors of the UN System" to be reminded of the rich history of efforts to improve performance in fields that are close to the UNCED agenda.¹

While a good start was made recently in providing governments information they need to understand UN system-wide environmental planning, governments have not shown an ability to make effective use of this information in many of the governing bodies involved. Today, for the first time, governments are being given information in Prepcom relating to the broader scope of environment-and-development activities required by the UNCED agenda. This

information is being provided at a time when relaxed international tensions offer the hope for better use of it to meet problems that pose risks to the welfare of individual people as well as nations and life generally on this planet. Thus a unique opportunity now exists for governments to set in motion a truly comprehensive approach based on the capacities of a multitude of organizations far larger than the UN or the UN system. How these global capabilities can be made effective at the national, local level where decisions are made daily that drive the process of "global change" is a daunting challenge.

The lessons learned twenty years ago during preparations for the Stockholm Action Plan greatly influenced what followed; the current preparations for UNCED may be no less valuable for "Agenda 21".

PART ONE - SETTING THE STAGE

1. THE 1972 BACKGROUND

The principal document on which governments based their decisions on institutional issues in 1972 was a Stockholm Conference document, "International Organizational Implications of Action Proposals".⁴ The intergovernmental Preparatory Committee set up by the UN General Assembly took the position that "form should follow function" and accepted the criteria suggested by the Secretary-General of that conference. These were and remain a useful starting point for current discussion:

- (a) any organizational arrangements should be based first on agreement about what needs to be done. Until this is reached, no firm decision can be made on the ways and means to be adopted;
- (b) all functions that can best be performed by existing organizations should be assigned to those organizations, both international and national, most capable of carrying them out effectively. No unnecessary new machinery should be created;
- (c) it is more logical to consider a network of national, international, functional and sectoral organizations with appropriate linkages and "switchboard" mechanisms, whereby international organizations supplement and complement national organizations, than to think in terms of a global "super agency";
- (d) any action envisaged should allow for the preliminary state of knowledge and understanding of environmental problems, and should be flexible and evolutionary;
- (e) governments will want to attach highest priority to the need for co-ordination and rationalization of the activities and programmes of the various international organizations active in the environmental field. This is essential in order to avoid overlap and duplication and to assure more effective use of scarce resources of money and manpower;
- (f) any policy centre that is expected to influence and co-ordinate the activities of other agencies should not itself have operational functions which in any way compete with the organizations over which it expects to exercise such influence;
- (g) in the establishment of any additional or new machinery it is essential to provide strong capability at the regional level;
- (h) the United Nations should be the principal centre for international environmental co-operation;
- (i) the organization of environmental activities within the United Nations should be so designed as to strengthen and reinforce the entire United Nations system;
- (j) environmental problems and situations vary greatly among nations and any organization arrangements contemplated must necessarily bear this fact in mind.⁵

2. 1972 MANDATES AND INSTITUTIONAL FUNCTIONS

On the basis of these criteria recommendations for institutional changes were presented at the Stockholm Conference laying the basis for specific institutional mandates governments defined when creating the UN Environment

Program in 1972. These were set forth in General Assembly Resolution 2997 (XXVII), "Institutional and Financial Arrangements for International Environmental Cooperation" of 15 December 1972, taking account of the Stockholm "Action Plan" (see next chapter) as conveyed in the Report of the Secretary-General on the UN Conference on the Human Environment.⁶

"Aware of the urgent need for a permanent institutional arrangement within the United Nations system for the protection and improvement of the environment," the Assembly established four new mechanisms:

- a Governing Council of 58 states elected by the Assembly,
- an environment secretariat headed by an Executive Director elected by the Assembly,
- an Environment Fund to provide additional financing on a voluntary basis, and
- an Environment Co-ordination Board to coordinate environmental work of the UN system.

To each of these the Assembly assigned specific tasks summarized as follows:

1. to the Governing Council:

- to promote international cooperation ... and to recommend ... policies to this end;
- to provide general policy guidance for direction and coordination of environmental programs within the UN system;
- to receive and review periodic reports on program implementation within the UN system;
- to review the world environmental situation and ensure that emerging problems are adequately considered;
- to promote contributions by scientific and other professional communities to knowledge, and to program formulation and execution;
- to review the impact of environmental policies on developing countries, and their costs, and ensure compatibility with national development plans and priorities;
- to review and approve the uses of the Environment Fund as well as formulate procedures for its operation.

Additionally, the Assembly required the Council to report annually through ECOSOC and invited particular attention "to questions of co-ordination and to the relationship of environmental policies and programmes within the UN system to overall economic and social policies and priorities."

2. To the Executive Director of the small secretariat serving as "a focal point for environmental action and coordination in the UN system":

- to provide substantive support to the Council;
- to coordinate environment programs in the UN system, and review and assess their effectiveness (and to chair the Environment Co-ordination Board, see below);
- to advise intergovernmental bodies of the UN system on environmental programs;
- to secure cooperation from scientific and other professional communities worldwide;
- to provide advisory services for promotion of international cooperation;
- to submit proposals to the Council on medium- and long-range planning for UN programs;
- to bring any matter to the attention of the Council;
- to administer the Environment Fund (and keep the problem of additional financial resources for developing country needs under review);
- to report on environmental matters to the Council;
- to perform such other functions as entrusted by the Council.

The Assembly followed the Stockholm recommendation that the Executive Director be elected by governments in the General Assembly on the nomination of the UN Secretary-General, and also decided that while the costs of servicing the Council and of providing the small secretariat were to be covered by the UN regular budget, operational programme costs and programme support and administrative costs of the Environment Fund would be covered by the Environment Fund.

3. The Environment Fund was established "to enable the Governing Council ... to fulfil its policy-guidance role for the direction and coordination of environmental activities." To do this the Assembly mandated the Fund to "finance wholly or partly the cost of the new environmental initiatives undertaken within the UN system," including those envisaged in the Stockholm Action Plan, with particular attention to "integrated projects."

As examples of "programmes of general interest" for which this fund should be used the Assembly specified the following:

- regional and global monitoring, assessment and data-collecting systems, including, as appropriate, costs for national counterparts; the improvement of environmental quality management; environmental research; information exchange and dissemination; public education and training; assistance for national, regional and global environmental institutions; the promotion of environmental research and studies for the development of industrial and other technologies best suited to a policy of

economic growth compatible with adequate environmental safeguards; and such other programmes as the Governing Council may decide upon." In the implementation of such programmes, "due account should be taken of the special needs of the developing countries."

Given the need "to ensure that the development priorities of developing countries shall not be adversely affected", the Assembly decided the Executive Director should keep under continuing review the problem of measures "to provide additional financial resources on terms compatible with the economic situation of the recipient developing country." The Fund was expressly to be used to support coordination inside and outside the UN system.

4. The Environment Coordination Board (ECB) was established within the framework of the Administrative Committee on Co-ordination (ACC) and under the chairmanship of the Executive Director "in order to provide for the most efficient co-ordination of United Nations environmental programmes." All organizations and regional economic commissions of the UN system were "invited" - the Assembly could do no more - to cooperate, as were other organizations and governments. The ECB was asked to report annually to the Governing Council.

A detailed review of performance of the above tasks is beyond the scope of this paper, but it should be noted that it is in large part the successes of the resulting UN Environment Program that have led governments to consider strengthening the capacity of the UN system further to deal with newly-perceived global issues.

It is also evident that the combined efforts of UNEP's Governing Council, Executive Director, Environment Fund, and coordination mechanisms set up by the General Assembly in 1972 have enabled governments to reach agreement much sooner than would otherwise have been possible on issues related to global security and risk management, including specific international accords dealing with stratospheric ozone protection⁷ and hazardous wastes.⁸ Similar successes at a regional scale were recorded earlier in the Mediterranean and other regional seas action plans, each with associated research, monitoring and economic planning activities as well as formal international agreements.

All of these broad, comprehensive programs demonstrated the utility of promoting international co-operation and co-ordination, providing policy guidance within the UN system, and enlisting contributions from scientific and other professional communities to knowledge and program development. Recent developments highlight the need to reinforce and strengthen the capacity of international organizations to carry out the tasks and functions governments agreed on in 1972. This paper will summarize experience since then as a basis for identifying some institutional options for 1992.

3. THE STOCKHOLM "ACTION PLAN"

A Functional Framework. The "Action Plan" governments approved at Stockholm, and subsequently in the General Assembly, was a listing of 109 approved recommendations that had been dealt with sectorally, by subject area,⁹ and redistributed according to function into three components: the global environmental assessment program ("Earthwatch"), environmental management activities, and supporting measures.¹⁰ While precise descriptions may be found in the Stockholm Action Plan For the Human Environment, in general terms they may currently be seen as follows:

1. Assessment functions; improving understanding to provide a rational basis for environmental management, or —as currently expressed— management for sustainable development. Many assessment activities, like research and monitoring of environmental parameters, and evaluation of resulting data, are primarily carried out by national institutions working together in cooperative international programs to improve the quality, compatibility and relevance of their results. These collaborative programs are developed by UNEP in close co-operation with other components of the UN system, especially the Specialized Agencies, as well as other international organizations outside the UN system, like the scientific community through ICSU — the International Council of Scientific Unions — and the International Union for the Conservation of Nature (IUCN), each in their respective areas of responsibility and competence.

The design of many such assessment programs was well advanced during the preparatory process leading up to Stockholm since there was a wealth of experience on which to draw; international scientific activi-

ties in the Antarctic started in the last Century and cooperative investigations in such fields as meteorology, health and telecommunications were well advanced long before the UN was established. The success of scientific collaboration leading up to the International Geophysical Year (IGY) of 1957-1958 had inspired many similar programs in different fields, such as the International Biological Program that had, in turn, been converted to a regular, funded activity at UNESCO - the Man and Biosphere Program (MAB) - and there were many similar experiences on which to draw. Thus, it was not surprising that when governments illustrated the uses to which the new Environment Fund should be put, in Resolution 2997 above, they concentrated on assessment functions.

Many of these programs have since proven their worth, whether with regard to global problems such as measuring changes in mass balance of glaciers as an indicator of climate change, or methyl mercury levels in regional fisheries, and are now ready for expansion and strengthening. There is widespread agreement on the need for major reinforcement of UNEP's capacity to take the lead in providing "early warning" of major environmental risks, assessing these risks, and helping states to develop cooperative measures to reduce them or mitigate the consequences, such as through better contingency planning.

To cope with scientific uncertainty about basic cause-and-effect relationships, continuing processes of assessment have relied on international groups of experts like the UN Scientific Group of Experts on the Effects of Atomic Radiation, UNSCEAR, set up by the Assembly some 30 years ago.¹¹ Another group well-known in environmental circles is GESAMP - the Group of Experts on Scientific Effects of Marine Pollution - that was appointed by international organizations themselves in order to provide assessment information they need to improve the effectiveness of the UN system in helping governments deal with related matters. GESAMP assessments have gained increasing credibility, in part because its expert members - many of whom come from government institutions - are expressly working in an expert, non-instructed status.¹²

Recent experience with the Intergovernmental Panel on Climate Change (IPCC) which resembles UNSCEAR will be discussed below.

2. Management functions. While assessment activities could draw on the experience of earlier international programs, there was less

experience in shared management on which to draw in 1972, and, in any case, the Assembly recognized in resolution 2997 that, "the responsibility for action to protect and enhance the environment rests primarily with governments and, in the first instance, can be exercised more effectively at the national and regional levels." With this in mind, the Assembly specifically called on governments to entrust "appropriate national institutions with the task of coordinating both national and international environmental action."

Management activity at the international level calls for new policies, practices, agreements - including, but not limited to formal treaties - that make a difference by encouraging changes in state practice and, ultimately, human behavior. A variety of tasks are performed by international organizations ranging from facilitating processes by which states negotiate agreements and administer them, to designing and implementing the programmes, projects and activities required to give effect to them. Much of this experience has been gained in treaty mechanisms set up in relation to shared rivers or other bodies of water and fisheries, but Charter respect for state sovereignty is firm.¹³

Parallel to the treaty route to effective international action are such processes as the negotiation of agreed "guidelines" or "recommended practices" that are endorsed at the international level in declarations and other forms.¹⁴ Although not binding, these add pressures to modify national practice on environmental matters, particularly when non-compliance is brought to public attention by non-governmental organizations (NGOs) and the media. There is growing appreciation of the importance of "transparency" or "glasnost" as a means of mobilizing public pressures for compliance with agreements even when they are not formally binding, or if in treaty form, do not have effective means of ensuring compliance.

Establishing agreed criteria as a basis for standard-setting is an example of increasing reliance on "soft law" and other forms of international agreements that lack formal characteristics - and some of the drawbacks - associated with the treaty route to international law. A number of new techniques have evolved allowing the process of ratification to be bypassed by formally delegating powers for amendment of standards to a competent international technical body. Highly technical

Specialized Agencies like the International Civil Aviation Organization (ICAO), the International Telecommunications Union (ITU), the World Meteorological Organization (WMO) and the International Maritime Organization (IMO) have placed international standards in "technical annexes" or "regulations" that are periodically revised by intergovernmental expert groups without having to go through the ratification process each time.¹³

3. Support functions; strengthening human, institutional and other resources to ensure that all key actors - including developing countries - have the means to contribute to agreed actions and share in the benefits. Supporting measures required for actions in the assessment and management components that were identified in the Stockholm conference documentation included education, training, public information, organization of national and international activities, financing and technical co-operation. Many of these activities are a part of the normal "technical assistance" programs in which the UN system has extensive experience. Because of its growing importance, funding requirements for these purposes will be addressed in a separate chapter.

"Comprehensive" Action Plans & "Framework" Treaties. As noted above, the Assembly directed the Environment Fund in 1972 to support new initiatives with "particular attention to integrated projects." One of the first applications of the Stockholm functional "Framework" and process was UNEP's 1975 Mediterranean Action Plan which relied on extensive collaboration within the UN system, especially with FAO, and expert consultations involving scientific, legal, economic and other groups to prepare draft proposals for governments of the region.

The Mediterranean approach was applied by UNEP in its Regional Seas Program in ten other bodies of water through comprehensive plans that wove together cooperative research and monitoring with agreed treaties and other steps to reduce threats on a region-wide basis. Each of these regional efforts was launched by non-binding international agreement on a comprehensive plan. The "incipient" regimes set up by these agreements were followed in eight other regions by more formal regimes under "framework" conventions linked to separate protocols on more specific problems identified in parallel scientific research and monitoring programs.¹⁶ An "integrated planning"

component was included to address region-wide economic and coastal development, including - currently - studies of the economic and social impacts of projected sea-level rise. Each also had an institutional and financial component to assure that, once launched with the help of the UN system, governments would take over regional guidance and core financing.¹⁷

Lessons learned from this experience were applied not only in other regions but also at the global level, beginning with the 1977 Action Plan to Protect Stratospheric Ozone that will be discussed below.

By the end of the first decade, in UNEP's Report on the World Environment: 1972-1982¹⁸, a number of broad conclusions were drawn that are still largely applicable as the end of the second decade approaches, though there have been significant advances in some areas since 1982.

For example, the "first general conclusion" of this comprehensive review of environmental conditions and trends since 1972 was that "the data base is of very variable quality." Many projections of the future state of the world environment were found to be based on "only the scantiest of evidence about what, in fact, has been happening." Despite considerable documentation about major meteorological elements, such as carbon dioxide and ozone concentrations in the atmosphere, it was in 1982 "premature to say with certainty whether worldwide climatic warming has begun (or is likely). There is still not enough evidence to permit confident judgements of possible human influence on stratospheric ozone." Clearly, there has been significant improvement in both these areas, as in others that were seriously lagging ten years after Stockholm. But it is still the case - as it was in 1982 - that uncertainty characterizes "the amount and condition of ground waters", "global data on the pollution of the oceans and seas" and "the scale and rate of deforestation" as well as rates of degradation of deserts, rangelands, farmlands and other major land-use categories.

Despite progress made by 1982 in carrying out the Stockholm assessment function, according to this review, "experience shows that international action is more difficult where the need goes beyond information collection, analysis and dissemination and involves joint management of commercially important resources, especially where national interests conflict."

(The conclusions of this report on the first decade after Stockholm will be superseded in early 1992 by a comparable study now underway by UNEP.)

PART TWO - RECENT DEVELOPMENTS

4. CHANGES SINCE 1972

A number of changes since 1972 are cited below that should be taken into account when contemplating institutional options under current circumstances. Many other changes, including a possible "new world order" now emerging, will have profound effects on how the international community of nations addresses the issues at UNCED. Larger issues than those on the UNCED agenda will also shape the institutional setting for the remainder of the Century, among them the reduction of cold war tensions and growing efforts to strengthen human rights and capacities. Even the Charter purpose - that the UN is to be a "center for harmonizing the actions of nations" in the attainment of common ends - need not be seen as limited to nations only as it was when the UN Charter was signed a half-Century ago on behalf of "we the peoples of the United Nations . . ."

Without addressing these larger issues directly, this chapter outlines some of the changes that, on the face of it, have implications for how the community of nations might better address new challenges. These arise from awareness that despite continuing uncertainty, global environmental problems and risks to international security are, indeed, becoming serious, alongside growing gaps between social and economic well-being of nations and societies, and awareness that the environment-development relationship is fundamental and must be attacked comprehensively, rather than in piece-meal fashion. Public perception of these apparent threats to human well being has already led political leaders to suggest entirely new institutional arrangements in recent high-level declarations that open up, for the first time, possibilities of significant institutional adjustments in the new system set up after the Second World War.

1. New Characteristics of Environmental Issues. The following is a brief summary of some of the principle changes in these issues since 1972.

The global dimension. Issues that were on the agenda at Stockholm but seemed remote in 1972 - like the risk to stratospheric ozone due to higher-flying, second generation supersonic transports - have been refined and, although the sources may be seen differently, the degree of risk, and consequences, can now be measured, and this has led to agreements to reduce risk. Similarly, the likely consequences of a doubling of atmospheric CO₂,

were first calculated in the last Century; only recently has this been recognized as an issue demanding - and getting - concerted international attention.

Uncertainty. Despite great advances in understanding environmental processes, in measuring present conditions and trends, and quantifying likely consequences, an unavoidably-large area of scientific uncertainty inhibits timely, collective action to reduce risk. Increasing awareness of the risks of desertification, deforestation, loss of biological diversity, stratospheric ozone depletion, global warming and other issues has been achieved thanks in large part to cooperative programs launched since Stockholm. Recent assessment results have focussed new attention on the need to improve understanding about natural processes in which human interventions are now a significant modifying force. New tools of observation and data processing allow holistic analysis of Earth's systems and strengthen the ability of science to observe environmental changes on a global scale. ICSU is currently sponsoring the largest ever international scientific research program: the International Geosphere-Biosphere Program - "Global Change", in order "to develop a scientific understanding needed to anticipate future change in the Earth's system" and, "to provide a foundation for decision makers."¹⁹

Caution. Since uncertainty is a serious obstacle to collective action, many governments favor a precautionary approach as most recently expressed in the declaration adopted at the ministerial conference convened by the UN Economic Commission for Europe (ECE) in Bergen, Norway, in May 1990:

In order to achieve sustainable development, policies must be based on the precautionary principle. Environmental measures must anticipate, prevent and attack the causes of environmental degradation. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.²⁰

Growing lead-times. Better understanding of global processes helps one recognize the long lead-times between action (or inaction) and effect, and the consequent value of identifying early, cost-effective measures that can reduce future risk. For as much as ten years after their release, CFCs drift up through the troposphere before beginning a century-long catalytic process of stripping ozone in the stratosphere.

Irreversibility. There is growing awareness that some of the international environmental issues that seemed correctable at Stockholm in 1972 may, in practice if not in theory, be irreversible; unless preventive

action is taken at an early enough stage changes may take place that are beyond the power of humans to correct. The depletion of stratospheric ozone due largely to man-made compounds is an obvious example, loss of species and biological diversity another.

But so are other issues much closer at hand, like the loss of arable soil which, in 1972, appeared to be a problem "fixable" by intelligent choices of land-use and technology. These were soon recognized to be economically or socially beyond the reach of many countries; initially due to population growth or increased costs of petroleum, currently abetted by indebtedness and the inability of governments and their institutions to overcome structural difficulties. The continuing degradation of the resource base in Africa suggests an apparent irreversibility in the face of economic hardship.

Even for those countries with less severe economic constraints, the risk of irreversibility is compounded by the combined effects of uncertainty and long lead-times. There is a growing likelihood that effective preventive action to reduce risks cannot be taken until uncertainty is reduced by compelling evidence; yet in some situations - the effects on low islands of sea-level rise due to climate warming, and the loss of biological diversity are perhaps the best examples - by the time "compelling evidence" is at hand, it may be too late to take the actions that can reduce the risk to acceptable limits.

Links Between Global and Local scales. Examining these issues in relation to food security, WCED concluded that progress on UNEP's 1977 "Plan of Action to Control Desertification" was hampered by "lack of financial support from the international community, by inadequacies of the regional organizations established to respond to the regional nature of the problem, and by the lack of involvement of grass-roots communities."

UNCED presents an opportunity to provide a new impetus for cooperative action to link preventive local measures with their global consequences and to mobilize international support for grass-roots participation in preventive action to stem what may otherwise become irreversible trends.

Flexibility. The combined effects of uncertainty and growing lead-times argue for considerable flexibility when agreements are reached on measures to reduce risk or prevent damaging trends from continuing to their

logical conclusions. Many such procedures have been perfected whereby binding agreements between states can be revised in the light of new insights; such as the concept of "framework" conventions and related protocols setting out more specific undertakings, and the use of annexes with simplified procedures for revision. But even non-binding agreements between states have been effective in mobilizing international action, especially on an evolving basis in the face of rapid change.

Emergencies. Dramatic incidents have highlighted the need for improved international capacity to assist countries to anticipate and deal with emergencies which may otherwise threaten irreversible impacts. These have ranged from industrial and power-generating incidents to oil spills and releases of toxic compounds that bore risks at an international scale and were of such a magnitude as to be beyond the capacity of most states to deal with unilaterally.

While contingency planning centers have been set up in a regional context, such as the Regional Oil Combatting Center in Malta established under the Mediterranean Action Plan, and a capability exists under international treaties to assist states in connection with nuclear accidents (under IAEA), the USSR has called for a new UN Center for Emergency Environmental Assistance to provide quick-response cooperative action in critical environmental situations and the Assembly has endorsed the Secretary General's proposed "International Decade for Natural Disaster Reduction" for the 1990s with an international board of trustees, an expert committee, a small secretariat, and a trust fund.²¹

2. Environment and Development. Almost twenty years ago, in December 1971, the General Assembly recorded its satisfaction with steps taken during the first year of preparations for the 1972 Stockholm Conference to address the concerns of developing countries, including the 1971 meeting in Founex, and recorded its views on a relationship that, judging by the tone of a resolution on "Development and Environment", was still strained:

"Conscious that the main objective of developing countries is integrated and rational development, including industrial development based on advanced and adequate technologies, and that such development represents at the present stage the best possible solution for most of the environmental problems in the developing countries;²²

Whereas the "Founex" Report laid the basis for a positive definition of this relationship, it was only the start of an ongoing process. Sixteen years

later, thanks to the WCED report and work by an intergovernmental group on long term environmental perspectives, the UN General Assembly was ready, specifically, "to propose long-term environmental strategies for achieving sustainable development to the year 2000 and beyond."²³

From a variety of sources have come new ideas for institutional arrangements to deal with emerging environmental problems and the key issue of sustainable development. Some of these have been voiced by heads of state and of government, others by intergovernmental expert meetings and notable private citizens associated with the UN and with environmental issues. None have received more attention than the WCED findings whose report - "Our Common Future" - was released in 1987 and presented to the General Assembly at its 42nd session that Fall. When established in 1983, the "Brundtland" commission was given three objectives:

- to re-examine the critical environment and development issues and to formulate realistic proposals for dealing with them;
- to propose new forms of international co-operation on these issues that will influence policies and events in the direction of needed changes; and
- to raise the levels of understanding and commitment to action of individuals, voluntary organizations, businesses, institutes, and governments.

The Commission's report notes the process of change underway in which "human activities and their effects were neatly compartmentalized within nations, within sectors (energy, agriculture, trade), and within broad areas of concern (environmental, economic, social). These compartments have begun to dissolve. This applies in particular to the various global 'crises' that have seized public concern, particularly over the past decade. These are not separate crises: an environmental crisis, a development crises, an energy crisis. They are all one."

To remind us of the dimensions of current change, with which future institutions must cope, WCED cautions -

"Our human world must make room in a finite environment for another human world. The population could stabilize at between 8 billion and 14 billion sometime next century, ... More than 90 percent of the increase will occur in the poorest countries, and 90 percent of that growth in already bursting cities. Economic activity has multiplied to create a \$13 trillion world economy, and this could grow five- or tenfold in the coming half-century. Industrial production has grown more than fiftyfold over the past century, four-fifths of this growth since 1950. Such figures reflect and presage profound impacts upon the biosphere, as the world invests in houses, transport, farms, and industries. Much of the economic growth pulls raw material from forests, soils, seas, and waterways."

Noting the fragmented nature of most of the institutions facing the challenges of growth in an interdependent world, the commission devoted an entire chapter to proposals for institutional and legal change as a part of

its "global agenda for change." Here they called for change at both national and international level "to give the central economic and sectoral ministries the responsibility for the quality of those parts of the human environment affected by their decisions, and to give the environmental agencies more power to cope with the effects of unsustainable development."

The implications for international arrangements were clear:

"the same need for change holds for international agencies concerned with development lending, trade regulation, agricultural development, and so on. ... The ability to anticipate and prevent environmental damage requires that the ecological dimensions of policy be considered at the same time as the economic, trade, energy, agricultural, and other dimensions. They should be considered on the same agenda and in the same national and international institutions."

In a section entitled "getting at the sources" WCED called for strengthening the ability of international organizations - including regional and subregional - to integrate environment more fully into their macroeconomic, trade, energy, and other sectoral programmes.

The WCED report on the needs of sustainable development provided a footing for the Assembly to adopt, as "the aspirational goal for the world community", the "achievement of sustainable development on the basis of prudent management of available global resources and environmental capacities and the rehabilitation of the environment previously subjected to degradation and misuse, . . .".²⁴

Accordingly, the Assembly then transmitted WCED's report to all governing bodies of the UN system with the request that they review their policies, programs, budgets and activities aimed at contributing to sustainable development. In general terms the concepts of environment and development have evolved over a period of 16 years into an international policy statement of sufficient content to be potentially useful for coordinating the activities of the entire UN system - when there is sufficient political will, and resources can be mobilized.

3. The Growing Importance of "ODA".²⁵ Whereas until recent years Official Development Assistance (ODA) accounted for only 30% of the international transfers of resources to developing countries - laying the basis, as it were, for far larger sums in the form of private loans and investments in the future development of these countries - today ODA has assumed a role of critical importance, accounting for some 50% of the resource flows to developing countries.²⁶

Total ODA - which in 1972 was far less than \$30 billion - grew to \$38 billion by 1980, while private flows amounted to \$66 billion, and export credits were \$16.5 billion. By 1988, however, private flows dropped to \$33 billion, and export credits to \$3 billion, while ODA increased to \$51 billion (and other official development finance grew from \$8 to \$16 billion). Recent statistical data reported to the General Assembly in the report by the Director General for Development and International Economic Cooperation reviewing "Operational Activities of the UN system,"²⁷ shows a declining share of ODA flowing through the UN system, a problem first highlighted in the UN Joint Inspection Unit report of 1985, "Some Reflections on Reform in the United Nations," better known as the "Bertrand Report." It may be hoped that reduced needs for military base rights and similar political favors will encourage a return to reliance on multilateral channels.

The combination of the critical role now played by ODA financial flows into developing countries, as the principal source of investment in their future economic strategies - of which a shrinking portion goes through multilateral agencies - and awareness of the need for preventive action in the face of long lead-times raises difficult choices for allocating resources between near and long term benefits. General Assembly guidance on this point - allocating resources between near-term and long-term environmental objectives - was expressed in 1987:

"Although it is important to tackle immediate environmental problems, anticipatory and preventive policies are the most effective and economical in achieving environmentally sound development."²⁸

But lofty policy guidance at the global level is of little use at the national and local levels where tough choices have to be made in specific contexts that vary from country to country. The relationship between abundant coal supplies in some developing countries, and the climate implications of growing CO₂ emissions from their use highlights the difficult choice between near and long term benefits as well as between local and global benefits when allocating current investment capital in ways that determine future energy strategies, and also raises the question whether bilateral or multilateral mechanisms are more effective in securing agreement on a common policy. (The related question of "additionality" is discussed in Chapter 9.)

4. Ambitious Goals Set By National Leaders. Today, as in 1972, "the constitutional strengths, and weaknesses, of any international organization

are, in the last analysis, in the hands of governments. The powers which it exercises are those which governments have vested in it; the powers which it lacks are those which they have withheld from it.²⁹ The Stockholm Conference was aided by the fact that a major donor state had already proposed that a \$100 million fund be established over five years with the promise of significant contributions.³⁰

An encouraging difference since 1972 is the increasing awareness by many national leaders of the need for concerted international action based on inter-disciplinary and inter-sectoral analysis of the problem, and a marshalling of international resources to support action at the source when this can be identified. The desirability of effective international mechanisms to affect this is broadly recognized, much of it stimulated by mounting concern over possible global warming, as in the 1988 proposal in Toronto for a "World Atmosphere Fund" (see below).

Recent intergovernmental pronouncements on institutional needs have also emphasized the need for coordination of policy and activities by national and international organizations in relation to the conceptual goal of sustainable development. In March 1989, for example, 24 government leaders agreed in The Hague (and have since been joined by an additional 19) on the need for "new and more effective decision-making and enforcement mechanisms" and concluded that:

"Financial institutions and development agencies, be they international or domestic, must coordinate their activities in order to promote sustainable development."³¹

Towards this end they agreed to promote principles that are directly relevant to institutional arrangements that might be set in motion at UNCED, among them:

"The principle of developing, within the framework of the United Nations, new institutional authority, either by strengthening existing institutions or by creating a new institution, which, in the context of the preservation of the earth's atmosphere, shall be responsible for combating any further global warming of the atmosphere and shall involve such decision-making procedures as may be effective even if, on occasion, unanimous agreement has not been achieved;

"The principle that this institutional authority undertake or commission the necessary studies, be granted appropriate information upon request, ensure the circulation and exchange of scientific and technological information - including facilitation of access to the technology needed - develop instruments and define standards to enhance or guarantee the protection of the atmosphere and monitor compliance herewith;

"The principle of appropriate measures to promote the effective implementation of and compliance with the decisions of the new institutional authority, decisions which will be subject to control by the International Court of Justice;

"The principle that countries to which decisions taken to protect the atmosphere shall prove to be an abnormal or special burden, in view, inter alia, of the level of their development and actual responsibility for the deterioration of the atmosphere, shall receive fair and equitable assistance to compensate them for bearing such burden. To this end mechanisms will have to be developed;

"The negotiation of the necessary legal instruments to provide an effective and coherent foundation, institutionally and financially, for the aforementioned principles."

In July of that year seven heads of government meeting in Paris agreed that -

"Protecting the environment calls for a determined and concerted international response and for the early adoption, worldwide, of policies based on sustainable development." These Heads of State looked to the 1992 UN Conference on Environment and Development to give "additional momentum to the protection of the global environment."

"We advocate that existing environment institutions be strengthened with the UN system. In particular, UNEP urgently requires strengthening and increased financial support. Some of us have agreed that the establishment within the UN of a new institution may also be worth considering."

Later in 1989 the Heads of State or Government of Non-Aligned Countries meeting in Belgrade -

"Emphasized the need to agree on a concept of sustainable development with a view to promoting effective international co-operation in environmental protection; the concept should necessarily include the meeting of basic needs of all people on our planet, stable economic growth, especially a speedier development of developing countries, as well as improving the quality of life."

Underlining that "international measures to control the use of environmentally damaging substances should be aimed at redressing the existing asymmetry in world consumption and production levels", these leaders called for "net additional financial resources and access to and transfer of alternative clean technologies. In this context they recommended that the creation of a special international fund to promote international cooperation in the field of environment to finance research and development of alternative technologies and to bring these technologies within easy reach of developing countries should seriously be considered."

They "called on developed countries and relevant international organizations to establish new and strengthen existing mechanisms and funds for stimulating the transfer to developing countries of "clean" technologies and technologies for environmental protection and improvement, and to earmark additional financial resources for environmental cooperation on concessional terms."

These pronouncements set very high goals and objectives for the 1992 Conference. Somewhat more specific are the seven "critical objectives for environment and development policies that follow from the concept of sustainable development" listed by the WCED:

- reviving growth;
- changing the quality of growth;

- meeting essential needs for jobs, food, energy, water, and sanitation;
- ensuring a sustainable level of population;
- conserving and enhancing the resource base;
- reorienting technology and managing risk; and
- merging environment and economics in decision making

and the seven goals they suggested:

- a political system that secures effective citizen participation in decision making,
- an economic system that is able to generate surpluses and technical knowledge on a self-reliant and sustained basis,
- a social system that provides for solutions for the tensions arising from disharmonious development,
- a production system that respects the obligation to preserve the ecological base for development,
- a technological system that can search continuously for new solutions,
- an international system that fosters sustainable patterns of trade and finance, and
- an administrative system that is flexible and has the capacity for self-correction.

5. New information requirements. Another major development since Stockholm has been the changing nature of information requirements. Not only is the need to understand global processes much more demanding than earlier foreseen, as reflected in ICSU's ambitious International Geosphere-Biosphere Program (IGBP), there is the growing need to observe and make information available on the process of change in ways that can improve current management decisions by non-scientists whose daily choices are driving a global process of change.

One issue not resolved at the 1972 Stockholm Conference had to do with the draft principle according to which,

"Relevant information must be supplied by States on activities or developments within their jurisdiction or under their control whenever they believe, or have reason to believe, that such information is needed to avoid the risk of significant adverse effects on the environment in areas beyond their national jurisdictions."

This principle was opposed by some on the grounds that "no state is obliged to supply information under conditions that, in its founded judgement, may jeopardize its national security, economic development or its national efforts to improve environment" and the matter was referred to the General Assembly for consideration.¹⁴ (Subsequently, many states have accepted comparable formal obligations in relation to treaty areas, as in Kuwait Convention Article XI and Abidjan Article 13.)¹⁵

In very brief terms, for the subject is too large to be addressed in this paper, the need is to shape information gathering techniques so as to

help the public understand the significance of changes and to satisfy different groups of users: the scientific community needs reliable, consistent data for modelling on a global scale; the national decision-maker - who may be a Minister or Mayor or corporate Chief Executive Officer - needs data useful for local decisions, at local scales.¹⁶ Obviously, the two sets of data should be compatible, and economy dictates that it be collected with as little duplication as possible. The distributed system approach adopted by UNEP's Global Environmental Monitoring System (GEMS) using geographic information systems under "GRID" - the Global Resource Information Database - is a good model. In effect, this approach encourages exchanges of information between national, regional and global "nodes" that provide global datasets at scales useful for national planners, and, by strengthening national capabilities, enlists more national monitoring programs in the global effort to measure, and understand, significant changes on a planetary scale.

WCED also recommended a Global Risks Assessment Program:

- to identify critical threats to the survival, security, or well-being of all or a majority of people, globally or regionally;
- to assess the causes and likely human, economic, and ecological consequences of those threats, and to report regularly and publicly on their findings;
- to provide authoritative advice and proposals on what should or must be done to avoid, reduce, or, if possible, adapt to those threats; and
- to provide an additional source of advice and support to governments and intergovernmental organizations for the implementation of programs and policies designed to address such threats.

Such a program can be seen as a logical extension of UNEP's mandate to "review the world environmental situation and ensure that emerging problems are adequately considered . . ." and might be centered on UNEP's Earthwatch program, enlarged beyond its present collaborators and possibly headed by a steering group of eminent individual experts. The broad need to improve international advice to governments under new and changing conditions is recognized by many organizations in the UN system and a feasibility study to provide this periodically is underway by UNESCO.

Increasing attention is given in recent environmental treaties to the obligation of parties to exchange various types of information that directly relate to the undertaking and are generally relevant to information requirements for sustainable development.

The 1985 Vienna Convention for the Protection of the Ozone Layer, for example, specifies four categories of information:

- Scientific information, including public and private research, emission data needed for research, scientific results and assessment of these results with recommendations for future research;
- Technical information, including availability and cost of chemical substitutes and alternative technologies to reduce emissions, and limitations and risks involved;
- Socio-economic and commercial information, including production, use patterns and imports/exports and costs, risks and benefits of human activities as well as of regulatory actions being considered;
- Legal information, including national law and administrative measures, international agreements including bilateral, and methods and terms of licensing and availability of relevant patents.³⁷

Provision of far more specific information is required under other treaties including the Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution Concerning the Control of Emissions of Nitrogen Oxides or Their Transboundary Fluxes in which Article 8 and the Technical Annexes set very demanding requirements.

5. RECENT VIEWS ON UNEP FUNCTIONS

The Assembly's Perspective to the Year 2000. In 1972 the Assembly foresaw the goal of the UN Environment Program largely in terms of measures designed "to safeguard and enhance the environment for the benefit of present and future generations of man." Fifteen years later it adopted the "Environmental Perspective to the Year 2000 and Beyond" as "a broad framework to guide national action and international co-operation on policies and programmes aimed at achieving environmentally sound development" with the following "aspirational goals":

- The achievement over time of such a balance between population and environmental capacities as would make possible sustainable development, keeping in view the links among population levels, consumption patterns, poverty and the natural resource base;
- achievement of food security without resource depletion or environmental degradation, and restoration of the resources base where environmental damage has been occurring;
- provision of sufficient energy at reasonable cost, notably by increasing access to energy substantially in the developing countries, to meet current and expanding needs in ways which minimize environmental degradation and risks, conserve non-renewable sources of energy, and realize the full potential of renewable sources of energy;
- sustained improvements in levels of living in all countries, especially the developing countries, through industrial development that prevents or minimizes environmental damage and risks;

- provision of improved shelter with access to essential amenities in a clear and secure setting conducive to health and to the prevention of environment-related diseases, while alleviating serious environmental degradation;
- establishment of an equitable system of international economic relations aimed at achieving continuing economic advancement for all States based on principles recognized by the international community in order to stimulate and sustain environmentally sound development, especially in developing countries.³⁸

In the same resolution in 1987 the Assembly refined UNEP's mandate by endorsing the following statement of program priorities and functions for UNEP:

- To provide leadership, advice, and guidance in the UN system on restoring, protecting, and improving the environmental basis for, and in general be a catalyst in the promotion of, sustainable development;
- To monitor, assess, and report regularly on the state of the environment and natural resources and emerging environmental issues;
- to make available, in co-operation with other agencies where appropriate, guidance for environmental management, including the development of management techniques, criteria and indicators for environmental quality standards and guidelines for sustainable use and management of natural resources;
- to initiate and support the programmes and activities worked out by the developing countries for dealing with their serious environmental problems;
- to initiate and facilitate the development and, upon request, the co-ordination of implementation of action plans, in the developing countries, for the management of ecosystems and critical environmental problems. Such plans should be implemented and financed by the Governments concerned with appropriate external assistance.
- In co-operation with other concerned institutions, to establish and strengthen the institutional and professional capacity of developing countries with a view to integrating environmental considerations into their development policy and planning;
- to promote awareness of environmental matters through education and mass media;
- to co-operate with UNDP and other UN agencies, the World Bank and regional development banks, to strengthen the environmental dimensions of their programmes and technical assistance projects, inter alia, through training and personnel secondments.³⁹

Despite considerable success in carrying out the various tasks assigned by the General Assembly, UNEP's Governing Council, at the suggestion of the Executive Director, decided at its most recent regular session in May 1989 to strengthen UNEP's role as the "central catalyzing, co-ordinating and stimulating body in the field of the environment within the United Nations system."

A number of substantive "areas of concentration" were also identified that closely resemble the current agenda of the UNCED Preparatory Committee - atmosphere, freshwater, oceans and coastal areas, land resources (deforestation and desertification), biological diversity, biotechnology, and hazardous wastes and toxics - and within these broad areas the Council decided special

attention should be given to the following issues (which were not listed in order of priority):

- combating climate change;
- combating the depletion of the ozone layer;
- management of shared freshwater resources;
- controlling pollution in regional seas and proper management of their coastal areas;
- halting desertification and deforestation;
- conserving biological diversity within a broad socio-economic context;
- minimizing hazardous wastes, through the development of low- and non-waste technologies and the environmentally sound management of hazardous wastes and potentially toxic chemicals.

Five particular tasks cited by the Council provide a useful guide for review in subsequent chapters:

1. TO PROMOTE INTERNATIONAL COOPERATION AND RECOMMEND POLICIES TO THIS END;
2. TO PROVIDE GENERAL POLICY GUIDANCE FOR THE DIRECTION AND COORDINATION OF ENVIRONMENTAL PROGRAMS WITHIN THE UN SYSTEM;
3. TO REVIEW THE GLOBAL SITUATION AND IDENTIFY SIGNIFICANT EMERGING ENVIRONMENTAL PROBLEMS FOR CONSIDERATION BY GOVERNMENTS;
4. TO PROMOTE CONTRIBUTION OF SCIENTIFIC AND OTHER PROFESSION COMMUNITIES TO ACQUISITION, ASSESSMENT AND EXCHANGE OF KNOWLEDGE AND INFORMATION;
5. TO CONTINUE REVIEWING IMPACTS OF ENVIRONMENTAL POLICIES ON DEVELOPING COUNTRIES, INCLUDING ADDITIONAL COSTS INCURRED BY THEM IN CARRYING OUT ENVIRONMENTAL PROGRAMS AND PROJECTS.⁴⁰

UNEP's current Program Budget for 1990-1991 (approved at the 15th session of UNEP's Governing Council in May 1989) gives more detailed information on UNEP's activities in relation to six "major environmental problems" the council has decided to focus on to "assess their causes and to perfect means to deal with them." (Current information on these problems is available to the Preparatory Committee in reports prepared with the help of UNEP and other cooperating organizations):

- *(a) Climate change and atmospheric pollution: . . .
- *(b) Pollution and shortage of fresh water resources: . . .
- *(c) Deterioration of coastal areas and oceans: . . .
- *(d) Land degradation, including desertification:
- *(e) Biological impoverishment: . . .
- *(f) Hazardous wastes and toxic chemicals:⁴¹

Particularly pertinent for UNCED consideration of institutional aspects are the functions specified by UNEP's Governing Council for the current 1990-1991 program:

- * (a) Assessment and Monitoring: assessment, based upon monitoring of major environmental parameters, will be increased at both the global and regional levels;
- * (b) Policy formulation, planning and institution building: assisting countries in these functions, particularly in coordinating environmental action and economic planning, will enable them to address better the causes and sources of environmental problems;
- * (c) Assisting in the drafting and enactment of domestic and international environmental law: priority will be given to legislation and agreements aimed at easing the major environmental problems set out [above] and to assisting countries that request help in formulating domestic law;
- * (d) Fostering environmentally sound technologies: the intent is to promote the development and application of techniques for environmental rehabilitation and enhancement and of environmentally appropriate technologies for meeting human needs through cooperative action-oriented research, dissemination of information, establishment of institutional networks and carefully planned demonstration projects;
- * (e) Training: the primary means of delivering training to help develop national capacities for environmental management will increasingly take place through the activities of regional networks of national institutions;
- * (f) Public information: by strengthening its outreach program, among other things, UNEP will continue its efforts to deliver information to and stimulate collaborative action by non-governmental environment organizations, and to reach circles whose main concern is not environment, such as industrialists, parliamentarians, women's groups, youth organizations, religious institutions;

In sum, governments have recently reviewed and identified the functions they expect UNEP to perform, updating those laid down in 1972, and an explicit basis with defined program functions has been set by the Council.

6. RECENT EXPERIENCE WITH INSTITUTIONAL AND PROGRAM FUNCTIONS.

UNEP's Governing Council's most recent reformulation of the five functions assigned to it by the Assembly provides a useful framework for briefly reviewing existing institutional arrangements in relation to mandated functions:

1. TO PROMOTE INTERNATIONAL COOPERATION AND RECOMMEND POLICIES TO THIS END. The "catalyzing, co-ordinating and stimulating" functions central to UNEP have been marked with considerable success insofar as environmental issues are concerned despite funding limitations; these were largely overcome by the willingness of other organizations to join their resources and experience to a common programme.

A timely example is the current international effort to reduce the threat to stratospheric ozone. As early as 1973 the Governing Council was cautioned about possible "outer limits" in relation to "the generation of heat, the carbon dioxide content of the atmosphere, the ozone content of the

stratosphere, and the health of the oceans" which, if exceeded, "may endanger the continuance of human life on this planet."⁴²

By 1975 the Council had agreed to activities proposed by the Executive Director "in the area of possible risks to the ozone layer" and a UNEP strategy was developed. These early initiatives by UNEP and associated international organizations led up to the presentation to an intergovernmental expert meeting in March 1977 of a proposed "Action Plan to Protect Stratospheric Ozone" that laid the basis for unprecedented accomplishments in subsequent years. Since this early background to the Vienna Convention of 1985 and the 1987 Montreal Protocol are not well known, a summary is presented in Annex of steps taken between 1971 and 1977 leading to international research and monitoring efforts that laid the basis for what became, in the view of UNEP's Executive Director, "the first global convention to address an issue that for the time being seems far in the future and is of unknown proportions". Improved assessments made possible by the 1977 action plan continue to be of use, they led governments to agree in London in June 1990 on a total phase-out of CFC production under the Montreal Protocol and to set up new institutional and funding mechanisms.

Many of the steps now underway to cope with the "Greenhouse" issue draw on this experience. This suggests that this task has been well-performed for international pollution problems. As noted earlier, however, international problems related to degraded natural resources, such as desertification, have been better mapped and measured but improved assessments have not led to significant management action (although a possible agreement on global forests may be drawn up during UNCED preparations).

Beginning with the Mediterranean Action Plan in 1975 UNEP's future orientation and focus on collective planning to cope with common problems has shown considerable success despite high levels of political and even military tension between states in this region. And in more than one region, cabinet ministers of states actively engaged in hostilities have sat together to identify and agree on steps they could take to safeguard mutual future interests.

2. TO PROVIDE GENERAL POLICY GUIDANCE FOR THE ~~DIRECTION AND COORDINATION~~ OF ENVIRONMENTAL PROGRAMS WITHIN THE UN SYSTEM. This function is closely related to co-ordination functions assigned to the Executive Director

that have proven to be more difficult than foreseen in 1972. There are many reasons for this, including (a) inadequate funding, (b) the difficulty for governments to voice consistent positions in different international fora, and (c) the inherent difficulty in determining effective policies to slow such complex processes as deforestation, desertification, or loss of biological diversity, where active linkages between environment and development add to the problem of evaluating trade-offs between short-term and long-term costs and benefits. Even when, as is seldom the case, sufficient funds are in hand to make assistance available to support agreed environmental policies, there are conflicting demands for support to more immediate development needs.

As noted above, government representatives in different agencies and programs of the UN system often take positions based on sectoral analysis, frequently dominated by short-term economic as well as political considerations, neither of which is conducive to giving adequate attention to environmental and other considerations essential for sustainable development.

Until recently, a major obstacle to better coordination by governments and their provision of consistent policy guidance in various fora of the UN system has been the lack of information on the related, but uncoordinated activities of the widespread UN system. Without adequate information governments have little basis on which to develop consistent positions in the various governing bodies on which they are represented.

These problems were recognized in 1972 and lay behind the mandates given the Executive Director and the ECB, specifically requiring the Executive Director to submit "proposals embodying medium-range and long-range planning for United Nations programmes in the field of the environment."

Clearly, any effort to provide "policy guidance for the direction and coordination of environmental programs within the UN system" requires information about plans and intentions of bodies throughout the UN system, a problem made more difficult by the scattered nature of the UN system and the difficulty - despite powers given ECOSOC by Chapter X of the UN Charter - for ECOSOC (or the Assembly) to acquire information about agency activities and plans. Since no UN body has control over the programs or budgets of these agencies, the only effective means available to governments to exercise system-wide coordination depends on their ability to be informed and to act in a consistent manner in various governing bodies on which they are represented.

Significant progress is being made in the compilation and presentation to governments of critical information for system-wide co-ordination and policy guidance. Ever since "restructuring" in 1977, UNDP's resident representatives have been given responsibility to coordinate UN system activities at the country level where various "round table" and "consultative groups" are formed to bring all outside sources, including bilateral, into a more cohesive pattern. Since the "resrep" also represents both UNEP and UNCED, the Prepcom will have a basis on which to judge how well coordination of international inputs works at the national level.

At the international level there has been a gradual evolution under the original ECB of "joint planning." While the formal ECB mechanism was incorporated in the ACC some years ago - now supported under ACC by the "DOEM" - Designated Officials for Environmental Matters - the 1972 requirements of co-ordination fostered the evolution from what began as joint, bilateral planning discussions between UNEP and individual specialized Agencies and programs of the UN system, into periodic rounds of collective planning on particular themes - like marine pollution, or conservation of natural resources. Gradually, international organizations outside the UN system - notably the International Union for the Conservation of Nature and Natural Resources (IUCN) - were drawn into these thematic consultations to contribute to longer-term planning exercises, as in the "ECG" - the Ecological Coordination Group - where IUCN joined UNEP and the two principal UN agencies dealing with natural resources: FAO and UNESCO. Joint planning gave way to "thematic" joint planning, and the initial focus shifted from projects to programmatic consultations.

The current result of these efforts is the (2nd) System-Wide Medium Term Environment Programme (SWMTEP-II) for 1990-1995, a document submitted for approval by governments in UNEP's Governing Council and in the UN General Assembly, and as such the principle basis for harmonizing and coordinating environmental activities throughout the UN system. In its published form it presents governments with unique information on relevant work underway and planned, and is designed to assist governments to choose rational allocations of scarce resources in the many different governing bodies involved.

As presented to governments by UNEP's Executive Director, SWMTEP is intended to:

- Advance understanding of sustainable development and the means of achieving it, as well as understanding of environmental problems that can hamper the achievement of sustainable development and the ways of solving or alleviating them;
- Help define and establish the complementarity of the environmental goals and policies of the UN system and its components;
- Present an overall strategy and set up a planning framework for the use of the Environment Fund and for the environmental activities of all components of the UN system;
- Help define roles and working relationships among components of the system and facilitate the coordination of their environmental activities;
- Identify opportunities for increasing efficiency and effectiveness;
- Enable monitoring and evaluation of the activities of the system and thereby contribute to their continuing improvement." 43

In its December 1988 resolution on "Protection of global climate for present and future generations of mankind" the General Assembly considered that the activities in support of the World Climate Program as elaborated in SWMTEP-II should be accorded "high priority by the relevant organs and programmes of the United Nations system."⁴⁴ For the period 1990-95, these activities relate to two issues - atmospheric composition, processes and pollution, and climatic change - for each of which the SWMTEP document presents a description of:

- the problems addressed,
- the general and specific objectives,
- the system-wide strategy, and
- how it is to be implemented.

Like other UN programs, UNEP activities in support of this program are approved by its governing body in the form of a UNEP Medium Term Plan for the same period; currently 1990 - 1995. These general statements of intent, after approval, form the basis for UNEP's Program Budget - the biennial authority for use of available funds under which specific projects are approved.

As in the case of climate-related activities, the material now being reported to Prepcom on all environmental issues of concern to it greatly resembles the structure and content of SWMTEP insofar as the environmental content is concerned and probably could not have been assembled for Prepcom without the experience of SWMTEP behind it. Similar techniques have been developed for assembly of comparable information, common budgeting and programming cycles with regard to pertinent development activities of the UN system (though not including the Bretton Woods institutions) but in both cases there remain serious deficiencies, such as the primary focus on activities that will be supported by assessed contributions and regular budgets.

It is clear that information on UN system-wide medium and short-term environmental planning exists and can be drawn on by governments represented at various sectoral governing bodies to help them select policies "within the framework of the Environmental Perspective to the Year 2000 and Beyond" that can guide "international co-operation on policies and programmes aimed at achieving environmentally sound development . ." (per GA Resolution 42/186 of December 1987). This, however, begs the question, for the provision of a synoptic view of UN system-wide plans and capabilities becomes useful only if governments setting the policies of these agencies and programs take this information into account and apply their resources accordingly, internationally and nationally. This is true whether governments choose to exercise their influence for better coordination of the UN system through a "revitalized" ECOSOC, or in the various governing bodies that control key agencies and programs, or - preferably - both.

Generally speaking, international secretariats have greatly improved the quality and scope of information being presented to governments, but there is a limit on what they can do to encourage governments to set consistent policies. Recognizing the need to facilitate coordinated governmental determination of policy and priorities in each governing body in the UN system, UNEP's Executive Director suggested, and the Governing Council decided in 1989 that the Council itself should "express at the highest possible level to other programmes and organizations in the UN system the views of the Council in order, inter alia, to promote environmentally sound and sustainable development." To start this process the Council mandated its Bureau "to meet with the bureaux of counterpart organs of the specialized agencies and other organs of the UN to develop more positive and collaborative relationships."

⁴⁵ While it is not yet possible to evaluate this exercise, it remains to be seen whether those responsible for environment at the national level can have more impact on operating agencies at the international level than they do domestically.

3. TO REVIEW THE GLOBAL SITUATION AND IDENTIFY SIGNIFICANT EMERGING ENVIRONMENTAL PROBLEMS FOR CONSIDERATION BY GOVERNMENTS. This has been a major preoccupation of UNEP's Executive Director as shown in his annual State of the World Environment Reports to the Governing Council, as well as the decadal volume - The World Environment: 1972 - 1982 published in connection with the

1982 Special Session of the Council (a sequel is now under preparation for 1992).

These significant reviews on conditions and trends in all key environmental areas at a global, regional and even national level, are largely based on results from UNEP's "Earthwatch" program but represent only the "tip of the iceberg." They incorporate results of research and monitoring efforts such as "GEMS" - the Global Environmental Monitoring System - "IRPTC" - the International Registry of Potentially Toxic Compounds - and INFOTERRA - UNEP's world-wide referral system with over 130 national focal points, as well as other assessment activities underway throughout the UN system and beyond.

Increasingly, these assessment results are compiled in a form that reaches audiences beyond those already interested in environmental matters. This is done through cooperative arrangements with other institutions - mostly academic and non-profit - such as the Monitoring and Research Center (MARC) at Chelsea University in London, and the World Resources Institute (WRI) in Washington, whose biennial World Resources Report is widely circulated and translated.⁴⁶

As to "identifying emerging problems," the Executive Director's annual reports are intended to lay a basis for the Council to select these and the results may be judged by their subject matter ranging from comprehensive coverage of each topic in UNEP's priority areas, to, most recently, "the public and environment".

However, as noted earlier, a main finding of the 1972-1982 decadal review remains valid and even more pertinent today in light of current understanding of the locale in which critical changes are probably taking place:

The first general conclusion is that the data base is of very variable quality . . . there are startling gaps and a special lack of reliable quantitative information about the environment in the developing world. . . . some good programmes of regional marine monitoring, there are no reliable global data on the pollution of the oceans and seas. The amount and condition of ground waters is another area of uncertainty. On land, in spite of the recently completed preliminary assessment of tropical forests, there is conflicting evidence on the scale and rate of deforestation. There are general local and/or regional figures for the extent of deserts, rangelands, farmlands and other major land-use categories but detailed information about their condition - and rates of degradation - are rarely available.⁴⁷

Work is presently underway to bring this review up to date by 1992, but as of this time, although there have been improvements, the situation remains about the same in terms of the adequacy of data for policy decisions, particularly at the national level. For example, in its review of the requirements

for food security WCED suggested, "the initial task in enhancing the resource base will be to delineate broad land categories: enhancement areas (capable of sustaining intensive cropping and higher population and consumption levels); prevention areas (which by common consent should not be developed for intensive agriculture or, where developed, should be converted to other uses); and restoration areas (where land stripped of vegetative cover has either totally lost its productivity or had it drastically reduced), but cautioned;

Identifying land according to 'best use' criteria requires information that is not always available. Most industrial countries possess inventories and descriptions of their lands, forests, and waters that are detailed enough to provide a basis for delineating land categories. Few developing countries have such inventories, but they can and should develop them quickly using satellite monitoring and other rapidly changing techniques.⁴⁸

As Dr. Tolba states in the Forward to UNEP's "Environmental Data Report" - "In gathering information from monitoring activities world-wide, it has become apparent that most of the data come from developed countries." Clearly this is an area governments will wish to strengthen at UNCED.

4. TO PROMOTE CONTRIBUTION OF SCIENTIFIC AND OTHER PROFESSION COMMUNITIES TO ACQUISITION, ASSESSMENT AND EXCHANGE OF KNOWLEDGE AND INFORMATION. The function of promoting scientific and other contributions to knowledge and programming has been an area of considerable success throughout the UN system in which UNEP played a leading role ever since the active involvement of many non-governmental bodies in the preparations for the 1972 Stockholm Conference.

Scientific and other expert bodies. GEMS, for example, was designed in 1971-72 as a result of a merging of proposed plans drawn up by the operating agencies and programs of the UN system - with WMO in the lead - and by the unions and committees of the International Council of Scientific Unions (ICSU), in which the Scientific Committee on the Problems of the Environment (SCOPE) helped fashion the final product. These parallel contributions were presented to an Intergovernmental Working Group on Monitoring in August 1971 whose findings shaped the decisions at the Stockholm Conference, and the General Assembly's mandate to UNEP. Ever since then these programs have enjoyed significant guidance from the same combination of operating organizations of the UN system tied to their counterparts in national governments,

together with the international scientific community and specialized, non-governmental groups with relevant skills and experience.

As noted before, international institutions within the UN system have had growing recourse to the work of experts in groups such as GESAMP - the Group of Experts on Scientific Aspects of Marine Pollution - and, for inter-agency coordination, the IAWGD - the Inter-Agency Working Group on Desertification which coordinates work under the 1977 Plan of Action to Combat Desertification. As the multidisciplinary aspects of global issues have become more apparent, institutions outside the UN system have been drawn into these mechanisms, a practice long standing between WMO and ICSU in relation to the World Climate Program.

A recent example of this new pattern is AGGE - The Advisory Group on Greenhouse Gases - appointed by the executive heads of UNEP, ICSU and WMO to advise them on new developments related to climate change in light of recent findings. That negotiations have started on a possible framework convention on climate change is largely because of the conclusions reached in 1985 at a scientific conference sponsored by these organizations in Villach, Austria, which recommended - despite major uncertainties - that "scientists and policymakers should begin an active collaboration to explore the effectiveness of alternative policies and adjustments . . ."⁴⁹

In 1988 the governing bodies of the two intergovernmental organizations - WMO and UNEP - set up the Intergovernmental Panel on Climate Change - IPCC - endorsed by the General Assembly in December 1988, "to provide internationally co-ordinated scientific assessments of the magnitude, timing and potential environmental and socio-economic impact of climate change and realistic response strategies . . ."⁵⁰ The IPCC Interim Report of 1990 was a major contribution to the Second World Climate Conference, so much so that the General Assembly decided the IPCC should continue to support the negotiations now underway on a framework convention.⁵¹

There can be no doubt as to the utility of involving government representatives with expert qualification in the consideration of policy recommendations, such as "realistic response strategies", since their participation in the process improves the likelihood that governments will respond positively to the responses identified. But the presence of instructed experts - whether from governments, or industry, or other "special interest" groups - raises

questions about the credibility of the resulting assessment unless peer-review and "transparency" are handled with great care.

Industry bodies and corporations. Active participation by the corporate world has also been enlisted in environmental issues. The International Chamber of Commerce (ICC) played an important role before and after the 1972 Stockholm Conference and, along with various national associations of chemical manufacturers, was active in the 1977 intergovernmental expert meeting which drew up the "Action Plan to Protect Stratospheric Ozone." Their subsequent contributions of CFC production data and research results through the Coordinating Committee on the Ozone Layer (CCOL) showed how the corporate world could make significant contributions alongside government bodies. And when the time came for states to agree on specific undertakings, as in the 1987 Montreal Protocol, many of these corporations threw their support behind these undertakings rather than, as might otherwise have been expected, resisting them.

In November 1984, the World Industry Conference on Environmental Management (WICEM) brought together at Versailles, France, over 500 participants from 71 countries representing industry, government and relevant organizations. The resulting "WICEM Declaration" adopted five principles for industry on environmental matters as the consensus view of industry, including one on "sustainable development" asserting that "economic growth can be made compatible with environmental protection". On the basis of work since then, a second conference, WICEM II, is being hosted by the Netherlands Government in Rotterdam in April 1991, organized by the ICC with UNEP and UNCED to review progress since WICEM I and "extend the constructive dialogue with government policy makers and environmental leaders."

Another example of the intent of the UN system to enlist cooperation and encourage contributions from the corporate world is the UN Center on Transnational Corporations whose major study on "Environmental Aspects of the Activities of Transnational Corporations" in 1985 was the origin of a continuing program of research on issues related to the environment, most recently including the development of general principles to guide management of transnational corporations in the implementation of sustainable development

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Through its Industry Office in Paris UNEP maintains close contact with ICC world headquarters in that city as well as many other international

corporate bodies with whom cooperative programs have developed, such as IPIECA - the International Petroleum Industry Environmental Conservation Association.

Private financial institutions, on the other hand, have only tenuous connections with the UN system, perhaps because their functions related more closely to the Bretton Woods institutions.

Other NGOs. A major area of attention throughout the UN system, and a major theme in the WCED Report, has been the development of cooperative links to non-government organizations (NGOs) and private voluntary organizations (PVOs). Many of these organizations have long enjoyed formal consultative status with ECOSOC under Charter Article 71 and with other bodies of the UN system on issues of importance to their memberships; peace, human rights, poverty, et al.

The 1972 Stockholm Conference marked the first occasion on which a major UN Conference was accompanied by significant, parallel activities organized by large numbers of NGOs - many of whom had no previous contact with the UN system - with active support by the conference secretariat. Several months before the conference the ICC convened a Conference on Industry and the Environment, also in Sweden, and during the UN conference itself an NGO Forum attracted outstanding speakers and public leaders from around the world who contributed to public awareness and generated public enthusiasm for the UN environment programme which emerged.

Thus it was not surprising that the General Assembly in 1972 specifically recognized the need to emphasize relations with NGOs and, in GA Resolution 2997:

"Also invites other intergovernmental and those non-governmental organizations that have an interest in the field of the environment to lend their full support and collaboration to the United Nations with a view to achieving the largest possible degree of co-operation and co-ordination"

Shortly after the establishment of UNEP's Headquarters, outside funding was enlisted by UNEP to set up the Environment Liaison Center in Nairobi, Kenya, run for and by NGOs to facilitate NGO participation in the program. Today a global network of more than 6000 member organizations world-wide offers the opportunity for active participation in the program, now known as ELCI - Environment Liaison Center International - and this is being expanded in connection with UNCED.

A direct outgrowth the WCED Report is the Centre for Our Common Future located in Geneva which produces a periodical publication Brundtland Bulletin and in other ways provides services for NGOs to catalyze a wide range of follow-up activities and help create a global movement for sustainable development.

While environmental NGOs in affluent countries have often been active in relation to UNEP's activities - lending support in donor countries, carrying out cooperative projects, and championing their principal causes at Council and other meetings - only in recent years have they begun to play an influential role in countries outside the OECD region. As in many bilateral and multilateral development programs, there is an increasing effort to seek ways to involve local NGOs in both program planning and implementation at the national level.

5. TO CONTINUE REVIEWING IMPACTS OF ENVIRONMENTAL POLICIES ON DEVELOPING COUNTRIES, INCLUDING ADDITIONAL COSTS INCURRED BY THEM IN CARRYING OUT ENVIRONMENTAL PROGRAMS AND PROJECTS. This task has been a major preoccupation since the preparatory process leading up to the 1972 Stockholm Conference when the issue was first addressed in the 1971 "Founex Report," and later in the "Cocoyoc Report" which sought to turn the attention of the development community, then focused on a "New International Economic Order", towards a "basic needs" strategy.

"Our first concern is to redefine the whole purpose of development. This should not be to develop things but to develop man. Human beings have basic needs: food, shelter, clothing, health, education. Any process of growth that does not lead to their fulfillment - or even worse disrupts them - is a travesty of the idea of development."⁵³

Some of the issues involved here will be touched on in chapter nine on funding. What is noteworthy for this review of recent developments is the growing attention being given to the issue by the development community.

One of UNEP's most important accomplishments has been to stimulate awareness of the key role played by development funding, and the need to incorporate environmental considerations in development planning. A 1979 survey of nine international financing agencies revealed "a general absence (with the partial exception of the World Bank) of systematic attention to environmental impacts of all stages of project conception, design, and execution."⁵⁴

At a time when the 1976 ODA level had reached \$27 billion, the environmental significance of these funds was already clear:

"The environmental impact of the \$27 billion is indeed much larger than the sum implies. It is larger because the bulk of these funds are matched by counterpart financing by the recipient country. It is larger still because a considerable slice of this money is spent on technical assistance, on planning, on training, and on research. So the multiplier is not only quantitative but qualitative: the programs financed by development aid agencies will influence the thinking and shape the skills and capacities of people whose decisions will be affecting the environment decades from now."⁵⁵

UNEP's initial effort to introduce environmental considerations into the work of development organizations like UNDP and the World Bank relied on existing mechanisms for inter-agency consultation and coordination, chiefly the ACC chaired by the UN Secretary General. But largely as a result of the above 1979 study and other reports commissioned by UNEP, eight multilateral development funding agencies signed a 1980 Declaration of Environmental Policies and Procedures Related to Economic Development. By this declaration in 1980 international development finance institutions declared that they will:

- affirm their commitment to the Stockholm principles and recommendations;
- ensure that all programs and projects comply;
- negotiate with all to ensure "integration of appropriate environmental measures in the design and implementation of economic development activities;
- provide assistance to develop indigenous capacity;
- sympathetically consider proposals to enhance the environment and natural resources;
- support research and studies on new methodologies for environmental protection;
- support training; and
- disseminate information for guidance on the environmental dimension of economic development activities.⁵⁶

Thereafter these organizations set up CIDIE - the Committee of International Development Institutions on the Environment - to review periodically its members' progress in carrying out the policy laid down in the Declaration, and to encourage further effort to improve procedures and practices towards this end.

Although full membership in CIDIE is open only to international financing agencies, observers from bilateral agencies as well as from NGOs are welcomed. Annual reports by each of the CIDIE members give evidence of growing attention and funding for environmental works as a part of economic development encouraged by these agencies. The 1989 annual report by UNDP to its Governing Body, for example, shows that UNDP was then supporting 402 projects targeting specific environmental problems valued at \$300 million,

with an additional \$100 million financed from complementary non-core resources devoted to promoting sustainable development through non-governmental and grass roots organizations, such as the "Africa 2000" network.

Today the UNDP figure for environmental projects is more than \$500 million and the sums being disbursed by CIDIE member organizations far exceed this amount. While there is, at OECD, a mechanism for discussion and policy pronouncement available to the bilateral development-funding organizations, the Development Assistance Committee (OECD/DAC), and while the World Bank has member state committees to advise on policy matters, no intergovernmental mechanism exists that corresponds to CIDIE for policy or coordination among the Multinational Financing Institutions.

A report before the most recent Assembly on "International co-operation in the field of environment: provision of additional resources to developing countries" provides information based on responses from governments, inter-governmental organizations, and the UN system on the subject of additional resources.⁵⁷ Although the responses were, as noted in the report, "very limited," they serve to remind one of the diverse nature of organizations in the UN system that play supporting roles. The report includes information, for example, not only from UNDP and the World Bank and IFAD, but also from the International Maritime Organization, UNICEF, and the World Food Program.

The preparations for UNCED offer an opportunity to carry work forward on the whole question of "additional costs" incurred by developing countries in carrying out environmental programs and projects and expanding what is needed to put national development on a sustainable basis to include the costs involved in actions to reduce risks to the global commons. This will be further discussed in Chapter 9.

PART THREE - LOOKING AHEAD

7. NEW DIMENSIONS, NEW ACTORS.

1. Sustainable Development: the Need for Policy Integration and Effective Support. The need for effective policy and programme coordination as a means of mounting an international effort for sustainable development is seen more clearly in light of the functional decentralization of responsibilities in the UN system - each of whose Specialized Agencies and programs resemble the sectoral ministries and services at the national level to which they most closely relate - WHO to ministries of health, FAO to agriculture, WMO to weather departments, etc., etc.

International institutions face many of the same obstacles to co-ordination as do corresponding ministries at the national level, with the additional disadvantage that there is no central authority vested with control over the many agencies and programmes associated with the UN system, the more so when the Bretton Woods institutions are taken into account. While individual institutions, including Specialized Agencies and programs of the UN system and Multilateral Financing Institutions associated with it are capable of internal coordination of widespread activities and programs, the divisions of responsibility throughout this far-flung family of agencies and programs make it difficult if not impossible to coordinate the diverse disciplines and sectors that must be involved if sustainable development is the goal.

Fortunately, the UN system has shown itself responsive to new requirements for concerted action when the international community can agree on common goals with specific targets and when resources are provided. This has been repeatedly demonstrated in response to international agreements for the UN Water and Sanitation Decade, and, more specifically, by system-wide responses to agreed policy and programme co-ordination during the UN Emergency Operation in Africa, in which UNDP played a central coordinating role. It was less well demonstrated in other international programs where "agreements" may have been recorded because the political cost of standing aside was high, but there was never any real intention to provide funding support.

In recent years governments have turned increasing attention to program coordination, particularly in the context of "Operational Activities for Development" of the UN system.

The General Assembly's own Committee for Program and Coordination (CPC) recently reviewed "coordination as a policy instrument" and listed as important instruments of coordination within the UN system, the medium-term plans of the UN and other bodies, cross-organizational reports, system-wide medium-term plans, the annual overview report of the ACC, and the Joint Meetings of the CPC and the ACC. Nonetheless, it pointed to "a need for greater coordination both in the policy-making process and in programmatic activities."⁵⁸

As to policy-making, it saw "a need to enhance the common response of the organizations of the UN system to emerging issues of importance to the international community." Naturally, it highlighted the importance of the "ongoing process of revitalization of ECOSOC" in this regard.

In the Secretary General's "Comprehensive Policy Review of Operational Activities of the UN system" the emphasis is more on programming of operational activities and improved coordination at the country level, as are the steps to bring the resources of the entire UN system to bear at that level, especially those measures aimed at strengthening the capabilities of the recipient countries for technical cooperation. Looking ahead to the role of the UN system in the 1990s, the Director General for Development and International Economic Cooperation recently suggested that concentration on sustained development might be the primary goal of the operational activities of the UN system.⁵⁹

To some degree these developments show the success of UNEP's catalytic role in injecting the notion of a new relationship between environment and development into general policy statements and thereby advancing Stockholm Declaration principles that were, collectively, a forerunner of the current concept of "sustainable development":

- "The capacity of the earth to produce vital renewable resources must be maintained and, wherever practicable, restored" (Principle 3);
- "non-renewable resources . . . must be employed in such a way as to guard against the danger of their future exhaustion . . ." (Principle 5);
- "The environmental policies of all States should enhance and not adversely affect the present of future development potential . . ." (Principle 11)

But policy integration is rather meaningless unless agreements are backed up by commitments to give practical effect both to international programs and corresponding national efforts.

"Getting at the Sources". Towards this end a key WCED recommendation is to incorporate environmental and natural resource considerations - "full cost

accounting" - into all planning and decision-making, especially by institutions involved in development activities.

The Commission suggests assigning responsibility and accountability to major central economic and sectoral agencies for ensuring that their policies, programmes, and budgets support development that is ecologically as well as economically sustainable; further, that national governments conduct annual reports and audits on changes in their environmental quality and in the stock of the nation's environmental resource assets to complement the traditional annual budgets and economic development plans.

At the international level the major intergovernmental development agencies are now well-advanced in this as evidenced by recent reports of UNDP and the World Bank and virtually all of the operating Specialized Agencies show awareness of this new imperative.⁶⁰

Recognizing that it is ultimately at the national level that decisions affecting the global environment are made, a good deal of work has been carried out at the international level on methods that might help governments to carry out these actions. This support could be strengthened if governments gave it higher priority in governing bodies of various sectoral agencies and programs. Indeed, many of the concerns that lead to suggestions for a "new international authority" could be achieved if governments used existing bodies such as the General Assembly and ECOSOC to set overall policies and improved consistency in guidance their representatives provide at related governing bodies throughout the UN system. As noted previously, through such devices as SWMTEP and the integrated sets of information being presented to Prepcom, information on the capabilities and plans of agencies and programs of the UN system is now available if governments wish to use it for this purpose.

Capacity-building and networking. Since the ultimate "source" at which local decisions are taken is at the national level, the task of international organizations, both "environmental" and "developmental", is increasingly devoted to strengthening the human capacities of local, national institutions, particularly in developing countries, to carry out national planning and decision-making tuned to the needs of sustainable development.

This new emphasis is reflected in UNDP's Human Development Report 1990, now to be produced annually. Since the "purpose of development is to offer people more options," its authors assert that, "while growth in national production (GDP) is absolutely necessary to meet all essential human objects,

what is important is to study how this growth translates - or fails to translate - into human development in various societies."⁶¹ This report provides definition, measurement and policy analysis of human development with indicators that can serve as a standard reference for country and global analysis. A similar approach is shown in the World Bank's World Development Report 1990, which focused on poverty issues and uses similar indicators to analyze trends and measure performance.

Through the development of these capacities a demand for international support, whether in the form of technical assistance or capital investment, can be generated to produce the major programs and projects incorporating sustainable development.

Any transition to sustainability will require much larger flows of external capital than could either be absorbed by developing countries at present or are likely to be available to them from existing development assistance flows. Thus, the principal assistance required now is support for capacity building in the institutions of developing countries that will provide them with the professional, technical and managerial resources they need to manage their own transition to sustainable development.

In addition to traditional means by which development agencies support national institutions, consideration is being given to building networks to provide a framework and structure for a major, ongoing effort by international environment and development organizations to build up capacities to help countries, especially developing countries, to integrate environmental and sustainability factors into their development policies, programmes and projects in accordance with the principles and recommendations of the WCED Report.

An early step in setting up such a network would be to initiate a process of consultation to identify existing institutional and professional capacities in each country which have the most promising potential for contributing to the task, both at the levels of broad economic and social policy, and within each of the principal sectors of the economy, and determining those areas in which such capacities need to be strengthened or new additional capacities created.

The value of the network would be its establishment of continuing linkages between each such center and other centers within the country, and, internationally, through a communications network and information processing

facilities, as well as by publications, to provide each center with continuing access to information as to the latest state of knowledge, experience and plans of others, and available technologies relevant to their particular interests, along with services and support they may require.

As plans go forward for the IGBP, and "Mission to Planet Earth" initiatives with more intensive satellite surveys of natural resources, many of these communications and data-processing techniques can be adapted to speed the flow of useful information into such networks to benefit national institutions. Encouraging work is underway in the Assembly's Committee on the Peaceful Uses of Outer Space to draw up legal guidelines for the use of remote sensing to benefit sustainable development for all states, and practical experience is accumulating throughout the UN system in speeding acquisition of data and strengthening skills to convert it into useful information for national planning purposes.

The combination of experience between UNEP's INFOTERRA network and the field strength of UNDP with its widespread network of resident representatives also provides a good starting point for this. But so is the capacity of many organizations outside the UN system.

As an example of work needed at the regional level WCED called on the Organization of African Unity, the Southern Africa Development Coordination Conference, the Gulf Cooperation Council, the Arab League, the Organization of American States, the Association of South Eastern Asian Nations, and the South Asian Association for Regional Cooperation "to work together to develop contingency plans and the capacity to respond quickly to critical situations and issues", to develop comparable economic and environmental statistics, base-line quantity and quality surveys of shared resources, and early-warning capabilities to reduce hazards, and basic common principles and guidelines concerning environmental protection and resource use.

"There are" WCED noted "for example, over 200 distinct biogeographic zones in the world. Moreover, most non-island countries in the world share at least one international river basin. The entire national territories of nearly one-quarter of those countries is part of an international river basin. Yet over one-third of the 200 major international river basins in the world are not covered by any international agreement, and fewer than 10 have any co-operative institutional arrangements. These gaps are particularly acute in Africa, Asia, and Latin America, which together have 144 international river basins."⁶²

At the global level, WCED pointed to the extensive institutional capacity available and the role of the UN as "the only intergovernmental

organization with universal membership" which should "clearly be the locus for new institutional initiatives of a global character" to be redirected towards sustainable development.

"Although the funds flowing to developing countries through UN programmes represents a relatively small portion of total official development assistance (ODA) flows, the UN can and should be a source of significant leadership in the transition to sustainable development and in support of developing countries in effecting this transition. Under existing conditions the UN system's influence is often fragmented and less effective than it might be because of the independent character of the specialised agencies and endemic weaknesses of co-ordination. However, recent moves towards organisational reform and greater economy and efficiency could improve the capacity of the UN to provide this leadership, and should include sustainable development as an important criterion."

To do this, WCED suggested:

"All major international bodies and agencies of the UN system should be made responsible and accountable for ensuring that their programmes and budgets encourage and support development policies and practices that are sustainable. Governments, through parallel resolutions in the respective governing bodies, should now begin to reorient and refocus the mandates, programmes, and budgets of key agencies to support sustainable development. They should also insist on much greater coordination and co-operation among them.

"Each agency will need to redeploy some staff and financial resources to establish a small but high-level centre of leadership and expertise. That centre should be linked to the programme planning and budget processes."

To help launch and guide interagency co-ordination and co-operation, WCED suggested the UN Secretary General constitute under his chairmanship a special UN Board for Sustainable Development with the principal function of agreeing on "combined tasks to be undertaken by the agencies to deal effectively with the many critical issues of sustainable development that cut across agency and national boundaries."⁶³

A measure of the UN system response is found in the 1988 report of the ACC on coordination questions to UNEP's Governing Council.⁶⁴ Addressing the issue of "Sustainable and Environmentally-Sound Development," ACC outlined work in train over the next two or three years to collectively assist three countries, one in each region of the developing countries to:

- (a) identify and quantify their natural resources base and status of other environmental indicators;
- (b) through the application of existing tools (e.g. environmental impact assessments, social cost-benefit analysis, risk analysis, environmental accounting) adjust their existing or planned economic and social development plans at the sectoral levels (e.g. agriculture, industry, energy) to ensure that the activities provided for in these plans induce the least destruction to the natural resources and the environment; and
- (c) design projects within the adjusted plan for which the UN system would help them raise the necessary financial resources.

ACC expressed the hope that these three experiments would ultimately lead to the design of methodologies and guidelines for integrating environmental and natural resources considerations in national development plans and policies.

Similar work is underway at the World Bank under the Environmental Assessment Operational Directive (EAOD) issued in October 1989. This process calls for advance studies at the country level which have the effect of reducing later project conditionality and avoids costs and delays when unanticipated environmental problems arise. Since the assessment is the borrower's responsibility, the ultimate success of the directive will depend on strengthened environmental expertise within member countries and additional funds have been allocated to support the process.⁴³

2. Global Threat; Local Needs. In the 1972 Stockholm Declaration governments recognized that "a growing class of environmental problems, because they are regional or global in extent or because they affect the common international realm, will require extensive cooperation among nations and action by international organizations in the common interest" and therefore called upon "governments and peoples to exert common efforts for the preservation and improvement of the human environment, for the benefit of all the people and for their posterity."⁴⁴

While the global scale of potential environmental threats was recognized in 1972, and the relationship between these and local or national aspects acknowledged, the immediacy of environmental impacts were then felt primarily at the local and national levels. These included lethal smogs afflicting cities and crops, local fisheries and freshwater life in rivers and bays, the blighting of forests, oil spills, and the degradation of urban areas. Stockholm signalled consensus that although many such environmental problems were local in character and could best be resolved by national measures, they were nevertheless common to the experiences of many countries which could benefit from international co-operation. This was particularly true of developing countries where local shortages of clean water and arable soil were demanding priority attention as "development" problems, regardless of the "environment" label given them by others.

This duality between "local" and "global," and between "environment" and "development" perspectives complicated UNEP's task of establishing clear

priorities while maintaining an acceptable balance between global and local issues.

Insofar as the assessment functions under "Earthwatch", there was, as noted earlier, considerable experience to draw on and some programs, like GEMS and IRPTC, were well developed in working groups prior to the Stockholm Conference and so could be initiated without too much delay when UNEP was established. In carrying out its mandate to build global data collection and analysis systems UNEP could largely rely on sectoral data-collection systems set up by its partners, global institutions like WHO and FAO which already had global networks of cooperating institutions at the national level.

But when it came to international action to improve or correct a given environmental situation - under the management function - the programme tried to extend its services as best it could into a decentralized mode of operation to respond to pressures for help at the national level. This was, to say the least, difficult for what the Assembly had decided would be a "small secretariat" - the first component of the UN system headquartered in the developing world - with a non-operational mandate to "catalyze, co-ordinate and stimulate" and only limited funds to achieve its mission.

UNEP's successes have been primarily at the regional and global level, particularly in "comprehensive" approaches in which assessment, management and supporting activities have been merged to produce co-operative programs of action enabling governments to identify common problems and agree on shared tasks to cope with them.

UNEP's service in bringing governments to agree on anticipatory action to protect stratospheric ozone is a good example of the ability of diverse agencies and programs of the UN system to work together effectively preparing the basis for international agreements among sovereign states to deal with a common problem at the global scale.

Current attention to the issue of climate change - the "Greenhouse" issue - is often cited as evidence of growing awareness of global-scale environmental issues. What's new is that these topical issues - climate change, ozone depletion, biological diversity - have captured attention in the wealthy, temperate zone states because of their potential global impacts, whereas issues like desertification and deforestation, although recognized as 'global' in terms of their extent, did not. Today the "global" dimensions of climate change and the need to protect biological diversity have led to

increased international interest and funding to slow the rate of deforestation, reflecting in part new awareness that CO₂ emissions from deforestation may contribute significantly to atmospheric heating, and that forest clearing destroys the habit in which diversity is concentrated.

These developments suggest that the new global imperative for action to reduce global risks now reflected in negotiations underway on a framework convention on climate change in time for approval at UNCED may provide a political basis for mobilizing international resources that can be applied locally to slow destructive processes while also improving welfare and future prospects for the people directly concerned.

8. NEW INTERNATIONAL REGIMES

1. "Hard" and "Soft" Law Regimes. A wide range of approaches is available for the further development of international regimes and law governing the relations between states insofar as the international aspects of environmental and natural resources issues are concerned. These include the adoption of non-binding general principles, and their further negotiation into formal agreements - ie formal treaty law - including formal agreements on specific subjects - albeit with new procedures to allow flexibility to deal with scientific or technological uncertainty - to new approaches sometimes characterized as "soft law" - though some may question whether "soft law" has any status, while others might point to considerable "softness" in "hard law treaties."

Binding international agreements are not the only source of legal regimes, and a variety of agreements reached in political or sectoral bodies have been effective even though they lack customary characteristics such as "enforcement" provisions. In some parts of the world formal sanctions and liability provisions may be less effective as a means to ensure "compliance" than the pressure of public opinion when pertinent information is available on which an informed public can judge. When environmental problems are at issue there is growing recognition of the rights and obligations of humans and private entities as they relate to states both domestically and internationally. This is reflected in the first principle governments approved at the 1972 Stockholm Conference expressing the "common conviction" that:

Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations.

Such concepts are not new to the UN system. The constitution of the International Labour Organization, for example, set up after the First World War in 1919 defines as its purpose:

"to improve living conditions, raise living standards and promote productive employment."

Towards this end, national representatives of governments, employers and workers vote on, and thereby adopt, international legal covenants and recommendations setting forth minimum standards on wages, hours of work, working conditions, and other issues which member states are then required to submit within 12 - 18 months for national ratification, and thereafter to report to ILO on how domestic laws have been brought into conformity.⁶⁷

Many aspects relevant to sustainable development were advanced by Charter Article 55 enjoining the UN and agencies associated with it to promote universal respect for, and observance of, human rights and fundamental freedoms for all.

Indeed, it is pertinent when considering how to strengthen international law between states, to bear in mind that the Charter of the United Nations is cast in terms of an agreement among states - based on a determination among peoples:

"WE THE PEOPLES OF THE UNITED NATIONS DETERMINED
to save succeeding generations from the scourge of war, . . .
to reaffirm faith in fundamental human rights, . . .
to establish conditions under which justice and respect for the obligations arising from treaties and other sources of international law can be maintained, and
to promote social progress and better standards of life in larger freedom, . . ."⁶⁸

The 1948 Universal Declaration of Human Rights advanced such rights relevant to UNCED as:

- Article 22: Everyone, as a member of society, has the right to social security and is entitled to realization, through national effort and international cooperation and in accordance with the organization and resources of each state, of the economic, social and cultural rights indispensable for his dignity and the free development of his personality.
- Article 25: Everyone has the right to a standard of living adequate for the health and wellbeing of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.

- Article 26: Everyone has the right to education. Education shall be free, at least in the elementary and fundamental states. Elementary education shall be compulsory. Technical and profession education shall be made generally available and higher education shall be equally accessible to all on the basis of merit.⁶⁹

As will be noted below, the institutional implications of advances in the field of human rights since 1948 and the subsequent international covenants are highly pertinent to sustainable development and the UNCED agenda.

Progressive development of international law. Article 13 of the UN Charter gives the task of "encouraging the progressive development of international law and its codification" to the UN General Assembly, a body which, on the face of it, does not itself appear qualified to enact legally-binding agreements among states within the sense of what Article 38 of the Statute of the International Court of Justice identifies as sources of law the Court shall apply in deciding disputes:

- "a. international conventions, whether general or particular, establishing rules expressly recognized by the contesting states;
- "b. international custom, as evidence of a general practice accepted as law;
- "c. the general principles of law recognized by civilized nations;
- "d. . . judicial decisions and the teachings of the most highly qualified publicists of the various nations, as subsidiary means for the determination of rules of law."

Insofar as the "treaty" route is concerned, in its 1987 report the Brundtland Commission called on governments to accelerate their efforts to strengthen and extend existing and more specific international conventions and cooperative arrangements by:

- acceding to or ratifying existing global and regional conventions dealing with environment and development, and applying them with more vigour and rigour;
- reviewing and revising those relevant conventions that need to be brought in line with the latest available technical and scientific information; and
- negotiating new global and regional conventions or arrangements aimed at promoting cooperation and coordination in the field of environment and development (including, for example, new conventions and agreements on climate change, on hazardous chemicals and wastes, and on preserving biological diversity).⁷⁰

2. Growth of Environmental Treaties. Since Stockholm there has been a veritable explosion of environmental law in the form of international conventions and other formal agreements. UNEP and other parts of the UN system have played a leading role in most of these and it is not surprising that these organizations have been given a variety of tasks under these agreements ranging from secretariat functions to actively assisting contracting parties

to ensure that the agreed objectives are achieved and to facilitate national actions towards that end.

While UNEP has been active since 1973 in helping governments negotiate environmental conventions as well as carry them out, many other parts of the UN system have also played leading roles in environmental treaties within their spheres of competence; for example, UNESCO with regard to protecting wetlands, and cultural and natural heritage, FAO for fisheries, IMO for maritime events, and IAEA with regard to nuclear accidents.⁷¹ As a result various agencies have been given a variety of tasks or functions under these treaties, ranging from preparing and convening meetings of the contracting parties, to soliciting and receiving information relative to the agreements, and other specified functions.

Treaty agreements are a well-established way to establish new institutions, ranging from the UN itself to secretariats and trust funds for more specific purposes, as, recently, under the Montreal Protocol. But just as effective international action need not await treaty agreements, similarly, new institutional mechanisms can also be created by political agreements prior to treaty agreements.

Good examples of this can be found in UNEP's Mediterranean Action Plan of 1975 which laid the basis for negotiation and signature one year later of the Barcelona "Framework" Convention and two associated protocols, one on Cooperation Concerning Cooperation in Combating Pollution of the Mediterranean Sea by Oil and Other Harmful Substances in Cases of Emergency.⁷² What is relevant here is that work was initiated in 1975 under the politically-agreed "Mediterranean Action Plan" to set up a regional center to help governments cope with oil spills. Work on this was sufficiently advanced by the end of 1975 to permit reference to "the regional centre" in the protocol that was signed by governments of the region in February 1976. Thanks to this advance work the Regional Oil Combatting Center (ROCC) was established in Malta by the cooperating agency, IMCO, and the host government in December 1986, ie, a full year before entry into force of the Protocol.⁷³

Similarly, with "catalytic" funding by UNEP and support by various UN agencies long before the Barcelona Convention was signed, a network of cooperating scientific institutions around the Mediterranean expanded under the 1975 Action Plan so that it was ready when the Barcelona Convention entered into force and thereafter received support from a trust fund set up

under the convention. Throughout this period scientific analysis by these institutions supported inter-governmental negotiation of the 1980 Athens Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources; today more than 120 such institutions actively support continuing work under the Barcelona Convention.⁷⁴

There are obvious parallels here to the negotiating processes now underway on climate, bio-diversity and other conventions intended to be ready for approval at UNCED and the programmatic responsibilities of Prepcom itself; these offer considerable potential for mutual reinforcement of these preparatory efforts.

3. Sustainable Development Principles. The principal WCED legal recommendation called for the UN General Assembly to draw up a "Universal Declaration and later a Convention on environmental protection and sustainable development." This route to international law - by declaratory principles followed by negotiations on a formal treaty - has been employed with considerable success in recent decades.

Not cited in the ICJ Statute, but widely practiced in recent years, is the development of international law based on initial agreement on "general principles" in declaratory form - such as by non-binding "Declarations" adopted at the UN General Assembly and other intergovernmental bodies - as a first step to negotiations leading to formal agreements constituting international law. This approach has accelerated development of international law in a number of new fields, notably governing the peaceful uses of outer space, where the General Assembly adopted "principles" that then became the basis of negotiations on global treaties.⁷⁵ True, such statements are not binding and, except under unusual conditions, do not constitute international law.⁷⁶

Nonetheless, when political conditions are ripe, such agreements are a relatively easy way to start the process of building an effective regime and often lead to more formal agreements. Even if formal treaties do not develop, the general principles establish norms for international behavior which, in the presence of a free press and an enlightened public, put governments under pressure to conform.

In 1971 progress in the UN General Assembly's Seabeds Committee was leading the way to the convening of the UN Conference on the Law of the Sea (UNCLOS). Confidence in this process encouraged governments in 1971 to set up an Intergovernmental Working Group during the preparations for the UN Con-

ference on the Human Environment to negotiate a statement of principles that were to become the Stockholm Declaration in 1972.

Citing the 1972 Stockholm Declaration (as well as the 1982 Nairobi Declaration ⁷⁷) and other Assembly resolutions and international conventions, WCED suggested, "there is now a need to consolidate and extend relevant legal principles in a new charter to guide state behaviour in the transition to sustainable development" with the aim of having an agreed Convention text ready for signature within three to five years. No action on this recommendation has yet been taken by the Assembly.

Since this avenue, if taken, illustrates a number of institutional implications, it is useful to review the report of an Expert Group on Environmental Law set up by WCED which drew up specific recommendations to strengthen the international legal framework in support of sustainable development.⁷⁸

As noted in the Forward of this report by former President of the World Court of Justice (ICJ), Nagendra Singh, the general principles recommended do not merely apply in areas beyond the limits of national jurisdiction, or in the transboundary context; they are also intended to apply in the entirely domestic domain, and thus purport to break open traditional international law on the use of natural resources or environmental interferences and follow the practice that has developed since the 1948 adoption of the Human Rights Declaration.⁷⁹

The principles suggested for negotiation are contained in 22 articles. Eight of these are "general principles, rights and obligations concerning natural resources and environmental interferences", followed by 12 specifically concerning "transboundary" aspects. Two remaining principles relate to State responsibility and settlement of disputes. These twenty-two articles may be summarized as follows:

The first Article asserts the fundamental human right to an environment adequate for health and well-being, while article 2 provides that States shall conserve natural resources for the benefit of present and future generations. Towards this end, Article 3 would require States to maintain ecosystems and related ecological process so that benefits will be made available indefinitely. This promotion of optimum sustainability goes beyond the concept of maximum sustainable yield to reduce risks of future depletion. Article 4 obliges States to establish specific environmental standards and both collect and disseminate data, while Article 5 calls on States to carry out environmental impact assessments before permitting activities with risks. Under Article 6 they are to inform all persons in a timely manner who may be affected and grant those persons access to and due process in judicial proceedings. Article 7 requires States to ensure that natural resources and the environment is an integral part of development planning and implementation. Under Article 8 States are to cooperate with other States or through international organizations in fulfilling their obligations.

Part Two of the suggested principles on transboundary aspects (Articles 9 - 20) suggests norms including (Article 9) that transboundary natural resources shared by one or more States are to be used in a reasonable and equitable manner, while under Article 10 States must prevent or abate transboundary environmental interference or significant risk thereof which risks substantial harm. Article 11 stipulates that compensation shall be paid for substantial harm for which special procedures are set up in Article 12 for negotiations between states. Article 13 obligates States not to discriminate between external and internal detrimental effects.

Articles 14 through 19 call for cooperation in the exchange of information (15); prior notice of planned activities (16), consultations (17), cooperative arrangements for environmental assessment and protection (18), and in emergency situations (19). Article 20 strengthens the legal position of persons detrimentally affected by a transboundary interference by requiring States to grant equal access and due process and equal treatment as for their own nationals.

Finally, in articles 21 and 22, States are held responsible for a breach of an international obligation under these principles, and required to resolve any disputes peacefully through a step by step approach including, as a last resort, a binding process of dispute settlement.

These new procedures would involve strengthening existing machinery for dispute settlement at the ICJ, and, as well, at the Permanent Court of Arbitration, including the possibility of encouraging States to make greater use of the Court's capacity to form special chambers for dealing with environmental protection or resource management cases (a possibility that was signaled in the annual report of the ICJ to the Assembly in 1988.)

In his Forward, Judge Singh urged the development of a legal regime for "extraterritorial spaces" and areas that could be identified as "international commons" based on extensions of existing concepts relating to the high seas, outer space, and other dimensions. Such a regime would address questions of equitability and the primacy of protecting environmental factors in the "international commons."

4. Institutional Implications. Looking at a possible Convention on Environmental Protection and Sustainable Development, as recommended by WCED, the Legal Experts Group saw an opportunity for institutional innovation.

The proposed Convention might, for example, establish a UN Commission for Environmental Protection and Sustainable Development based on a membership of "competent individuals serving in a personal capacity .. elected preferably by secret ballot by States Parties to the Convention."

The proposed functions of the Commission would be to review regular reports from States and the UN system and other international governmental and non-governmental organizations on actions taken in support of the Convention. The Commission would be empowered to issue periodic public reports, assess and report on alleged violations, and review recommendations for proposed improvements to the Convention and other relevant international agreements.

The WCED legal experts also recommended the appointment by the Commission of a UN High Commissioner for Environmental Protection and Sustainable Development with functions similar to an "ombudsman" and "trustee" for the environment who would assess communications from private entities on compliance or violations of the Convention (and related agreements) and who could submit such cases for consideration by the UN Commission or other appropriate organizations. The High Commissioner would have special responsibilities for areas beyond national jurisdiction as well as for representing the interests of future generations.

This brief discussion highlights the ability of governments to use the traditional treaty route to establish not only new international law, at least for contracting states (and, eventually, by customary law to non-contracting states who conform), but also such new institutional mechanisms as are appropriate to achieve their agreed aims.

There are many options available in the treaty route and, since new environmental treaties have proliferated since the 1972 Stockholm Conference, much new precedential material on which to draw. The chief instrument for international cooperation among states remains the UN and the UN system of organizations and programs associated with it, but organizations lying outside that system can nonetheless be brought into formal relationships through Article 29 and 63 for the Security Council and Ecosoc, and otherwise.

Among various questions with institutional implications is whether or not the current practice according to which each environmental convention has its own secretariat, usually with its own trust fund and associated procedures should be maintained, or whether advantages of economy and practicality might lie with consolidation. For example, even if separate trust funds were indicated to support the precise actions called for by each convention, there might be advantages in common accounting services, in common disbursement procedures, somewhat the way existing institutions are drawn on for expenditure of funds collected under the Montreal Protocol, which itself is related to other activities under the new Global Environmental Facility, see below.

Somewhat similar concerns over the proliferation of economic and social programs supported by extrabudgetary funds in 1977 led the General Assembly, in its "Restructuring" resolution, to set up a single annual UN pledging conference for all UN operational activities for development. Unfortunately, international assistance flows are not keeping pace with growing needs

unleashed by demographic growth and a shrinking natural resource base alongside strife, indebtedness and other pressures on poorer countries. Unavoidably, this raises anew the question of "additionality".

9. FUNDING TO SUPPORT NEW ACTION

One of the principle "cross-cutting" areas calling for international cooperation at UNCED is the provision of adequate financial support. First raised as the question of "additionality" during preparations for Stockholm, success in resolving it 20 years later will be critical at UNCED. Although the distinctions can be blurred it may be useful to distinguish between three different intended purposes of additionality:

- * assistance to broaden participation in international environmental programs;
- * assistance to improve national development;
- * assistance to reduce global risk.

1. Assistance to broaden participation in international environmental programs. Governments in 1972 already accepted the need for additional funding intended to advance specific types of action in support of the UN Environment Program and, as noted in chapter 2 above, the Assembly decided in 1972 that a new voluntary Environment Fund should be established "to provide additional financial resources for environmental programmes" and specified separate sources of funding for UNEP's "policy guidance role for the direction and coordination of environmental initiatives undertaken within the United Nations system . . .", with distinctions between the intended uses of funds from the UN regular budget, and the new, voluntary Environment Fund. Although the Environment Fund was not intended to provide significant central funding to the UN system, only to "catalyze and coordinate", the fact that it started out with an average of about \$20 million annually, and has recently been held to about \$30 million, suggests not only a shrinkage in its purchasing power, but significant reduction of its leverage within the UN system.

While many of the activities for which developing country participation in international programs is sought are in the "assessment" category (a growing need for example in the case of IGBP) and active participation by national laboratories in cooperative research and monitoring programs is supported, even lesser support for their participation in negotiations on such

agreements strains the resources available today in UNEP's limited "catalytic" funds. Recently special arrangements to augment UNEP's limited funding were needed in the case of the IPCC for which an earlier joint WHO/UNEP Trust Fund set up to support participation by developing countries in various workshops and expert group meetings has been supplanted by a new UN voluntary fund.⁶⁰ Alternatively, funding for such purposes might be provided, at the multi-lateral level, by substantially increased funding through the Fund of UNEP while at the same time strengthening its role of co-ordination in mobilizing additional resources from bilateral and other multilateral sources. It seems clear that the major growth in the needs for international environmental co-operation and for strengthening the capacities of the organizations primarily responsible for such co-operation will require substantial funding increases. Setting up the Environment Fund as a "catalytic and coordination" fund was based on the principle that each operating element of the UN system should bear its own environmental responsibilities and costs, and that modest additional funding would suffice to help them better discharge these responsibilities in a coordinated manner.

In these circumstances, as operating agencies are encouraged by initial outside support from UNEP to undertake new environmental tasks, once UNEP's catalytic support is withdrawn these activities can only be maintained by either increasing the agency's budget, or sacrificing ongoing activities. This is no less difficult for government representatives on governing bodies than for executive leadership in the agencies, and it is to the credit of the UN system that so many sectoral agencies and programs - in health, agriculture, labor, atomic energy, etc, etc - were induced to launch new, sustained environmental activities by such relatively minor contributions.

Similarly, UNEP funding made possible a number of treaties under which specialized Trust Funds have been set up; on endangered species, in eight regional seas programs, and recently on stratospheric ozone depletion and hazardous wastes, among others, in all of which UNEP retains administrative responsibilities. Trust funds such as these will continue to be a convenient way to mobilize additional resources for particular aspects, after UNEP's "catalytic" funding has initiated an activity it can no longer support.

A new source of additional funding to support regional programs is demonstrated in the Mediterranean where, as a follow-up to the 1975 Action Plan, the World Bank and the European Investment Bank recently set up a

Environmental Program for the Mediterranean (EPM) to promote further enhancement of this effort and "foster the exchange of experience between the industrial countries of the northern rim of the Mediterranean and the developing countries along the southern and eastern rims." In the view of the Presidents of these two institutions:

"The EPM provides a significant opportunity to bring an analysis of environmental issues into the heart of Mediterranean development - to preserve the region's heritage and to ensure its sustainable development. The EPM is also an important instrument for mobilizing the financial resources required to implement the broad range of actions needed to tackle the Mediterranean region's environmental challenges. We are confident that others will join us in these efforts."⁴¹

It was just this sort of result that UNEP was set up to achieve. While the division of Fund expenditures between developing and industrialized countries has strongly favored the former, the Fund has also been used to support activities in developed countries, as in the Mediterranean in the mid 1970s and in Western Europe to initiate the Cooperative Program for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP) as a joint ECE/WMO/UNEP venture in 1977 which led to the Convention on Long-range Transboundary Air Pollution in 1979 and subsequent protocols.

But it is in the developing world where the question of "additionality" has been one of increasing frustration for UNEP, notably in their inability to mobilize additional funding for obvious international environmental problems like the loss of arable soil and productive vegetation, especially in semi-arid parts of the planet. Governments collectively recognized the problem when they approved the Plan of Action to Combat Desertification (PACD) at the 1977 Conference on Desertification but did little to support it, nationally or internationally. Ten years later the ACC confirmed the original estimates - that the annual investment level required to meet the cost of implementing PACD was only one-tenth of the annual losses incurred as a result of desertification - yet, despite such a compelling case, the "DESCON" mechanism set up to secure additional resources for funding desertification was found to be "marginal and inadequate."⁴²

In its review ACC noted that "one of the key impediments to the implementation of the PACD continued to be lack of well-formulated, coherent national plans of action to combat desertification well articulated with the overall national development plans and national policies to support them." For its part, ACC "urged its members on the Inter-Agency Working Group on

Desertification (IANGD) to assist governments to orient their development approaches towards sustainable development."

This joining of cooperative, international plans of action with the need for strong national actions in the context of national development goals blurs the distinction between two categories of international assistance to meet the needs of developing countries for "additional financial resources" called for in 1972:

1. Increased funds are required to enable developing countries to participate in international agreements and programs of an explicitly environmental nature, such as UNEP's GEMS and other "Earthwatch" activities, and in the negotiation of related international agreements;
2. Additional financing is also required to meet the costs of "incorporating environmental safeguards into their development planning" i.e., to make the transition to "sustainable development" by ensuring that environmental protection is integrated into national development policies and programs.

These two requirements for additionality are different and call for different criteria when considering their financial - and institutional - implications.

2. Assistance to improve national development. Agreement at Stockholm on Principle 12 identified the "additionality" problem which, as noted in chapter 2 above, the Assembly could not resolve when it created UNEP:

"Resources should be made available to preserve and improve the environment, taking into account the circumstances and particular requirements of developing countries and any costs which may emanate from their incorporating environmental safeguards into their development planning and the need for making available to them, upon their request, additional international technical and financial assistance for this purpose."

While funding might be available under the first category above to provide equipment, technical assistance, training and support which had the effect of strengthening local institutions that were useful for national development, this was not its primary purpose, and only very limited funding is available from UNEP to support sustainable development at the national level.

Funding for national (sustainable) development itself calls for funding of two different kinds:

- for technical assistance, training, research and technology research and transfer to strengthen national capabilities and enable developing countries to integrate environmental factors into their national policies and programmes, including access to the latest research on technologies in these areas, and,
- for the capital costs of incorporating environmental factors into major development projects and the costs of development projects undertaken primarily to protect the environment, or as a consequence of environmental damage. This latter category would

include, for example, the costs of major projects designed to restore degraded land and to protect low-lying coastal areas from rising sea levels due to global warming.

The funds that will be required to enable developing countries to integrate environmental factors into national development policies and programmes will be of a very much larger magnitude than those required to finance developing country participation in cooperative international agreements and programs of a specifically environmental nature. These larger funds could logically be channelled through a revamped and greatly expanded UNEP Fund, or through existing development assistance agencies, both multilateral and bilateral.

It is primarily here that the issue of "conditionality" arises, ie that ODA ostensibly targeted to support national development should not be made conditional on environmental performance. And it is here that a key issue has long been whether a country needing external assistance should sort out its own priorities and make such sacrifices as are necessary to accommodate environmental needs within the total resources available - domestic and international - or whether national development planning can proceed without this concern for the environment on the assumption that environmental needs will be covered by outside funding additional to existing ODA flows.⁸³

This national dimension of "additionality" gets mixed with other questions about "foreign aid", especially in parliamentary bodies where ODA funds are appropriated. While these issues are discussed among bilateral agencies at OECD/DAC, they are seldom echoed in the UN system. Indeed, the whole issue of "foreign aid" is poisoned by images of corruption and capital flight, mismanagement, neo-colonialism, and environmental destruction in the bodies where ODA funds are appropriated, and their availability is increasingly at risk as the cold war rationale for "foreign aid" diminishes.

In any case, given the lack of movement since 1972 and growing imbalances between international development needs and ODA flows, it is hardly surprising that "additionality" has become a key issue in high level pronouncements at meetings of developing countries, as in Brasilia in early 1989:

"International financing agencies should, through specific institutional facilities, ensure availability of sufficient additional resources, on concessional terms, to fund environmental protection projects in developing countries. In the allocation of resources for that purpose, no conditions should be imposed that would, in effect, result in a reduction of resources available for environmental protection."⁸⁴

3. Assistance to reduce global risk. Today, a third category meriting international financial assistance is apparent - the additional funding needed by disadvantaged countries to enable them to reduce their potential contribution to global risk; to help protect the "global commons".

The problem of stratospheric ozone depletion is a current example of a situation in which many developing countries have been asked to shoulder responsibility - and extra costs - of refraining from actions which could worsen a global problem that had been created mostly by the industrialized states, and to which developing country contributions are still negligible.

The developing country view was expressed at the 1989 meeting of non-aligned government leaders in Belgrade:

"the developed countries, which bear the primary responsibility for damage to the environment must also bear the primary responsibility for global environmental protection which includes the provision of additional resources for developing countries." New measures "must in particular include not additional financial resources and access to and transfer of alternative clean technologies" for which they suggested the creation of a "special international fund to promote international cooperation in the field of environment, to finance research and development of alternative technologies and to bring these technologies within easy reach of developing countries."

But with growing public concern about "global change" issues, especially climate change, attention has focused in the industrialized world on the need for increased international funding in that specific context. The Declaration by more than twenty government leaders in the Hague in March 1989 on the proposition that "most of the emissions that affect the atmosphere at present originate in the industrialized nations" and these nations "have special obligations to assist developing countries", showed that the need is recognized by a growing number of developed, as well as developing countries.

Recognizing the deficiency vis-a-vis sustainable development in general, with new perceptions of the need for collective action to reduce global risks, and given the long-standing issue since Stockholm of "additionality", many new ideas have been advanced or are in the process of being developed for the creation of new environmental "funds" to accomplish various objectives related to global environmental issues and sustainable development. Increasingly, they include funds tied to atmospheric and greenhouse issues, of which one of the first was a 1988 proposal for a "World Atmosphere Fund" financed in part by a levy on fossil fuel consumption by industrialized countries to mobilize resources for an "Action Plan for Protection of the Atmosphere," and a

separate Trust Fund "to provide adequate incentives to enable developing countries to manage their tropical forest resources sustainably."⁶⁵

At the November 1989 Ministerial meeting in the Netherlands, the Noordwijk Declaration was adopted by consensus recording agreement that:

"Many countries, especially developing countries will require assistance in identifying the causes of anthropogenic climate change, in establishing its extent and effect and also in responding to it. . . Industrialized countries will take steps to facilitate the transfer to developing countries of technologies to limit the global climate change through financial assistance and other mechanisms to overcome the incremental costs of acquiring and using these technologies. . . ."⁶⁶

This meeting also adopted a "provisional" target figure for "world net forest growth" of 12 million hectares a year in the beginning of the next century to increase CO₂ sinks and agreed that "developing countries will need to be assisted financially and technically" towards this and similar goals. It urged industrialized countries "to use financial and other means to assist developing countries in phasing out their production and consumption" of CFCs controlled under the Montreal Protocol, and adopted a series of recommendations specifically addressing funding needs related to this issue discussed below.

At the governmental level, in April 1989 Norway adopted a White Paper on the follow-up of the WCED Report setting a policy to stabilize CO₂ emissions by the year 2000 and start reducing total emissions of all greenhouse gases, and proposing that the industrialized countries allocate 0.1 percent of GDP to an International Fund for the Atmosphere to help finance transitory measures in developing countries and reforestation projects. This proposal called for funding in addition to the 1.1 percent of GDP Norway already gives in ODA (compared to an OECD average of 0.34 percent).⁶⁷

The Netherlands proposed a new "World Atmosphere Fund" which has been extensively studied by the McKinsey firm of that country whose background paper on Funding Mechanisms was circulated at the Ministerial Conference on Atmospheric Pollution and Climate Change in the Netherlands in November 1989 (see below).

At the September 1989 Tokyo Conference on the Global Environment and Human Response Toward Sustainable Development a number of innovative new approaches to international funding were reviewed and the Government of Japan announced that it would provide about \$2.25 billion of ODA for environmental purposes in the next three years, though the precise means by which this will be provided was not clear, nor is its relationship to a Japanese proposal to

establish an International Institute for Research and Development of New Technologies for Environmentally Sound Development.

Given the widespread indebtedness plaguing much of the world and the lack of private capital flows into the developing countries, the need for greater international financing to support preventive action in the developing world to reduce future global risks is gradually being accepted, but the modalities are only beginning to emerge. For example, after calling on the World Bank to support sustainable forest management, the Economic Declaration of the 1990 Economic Summit of Industrialized Nations in Houston, Texas, urged strengthening the Tropical Forest Action Plan (TFAP) and suggested negotiation of a global forest agreement. No proposals were made on how additional costs would be met other than at the expense of existing levels of development assistance.

Experience now being acquired in two recent intergovernmental agreements illustrate new approaches being tried that will doubtlessly influence recommendations at UNCED.

4. New Approaches to "Additionality". The agreement by the Contracting Parties to the Montreal Protocol at their July 1990 meeting in London illustrates the willingness of these states to provide additional financial support when the case for it is clearly stated, that is, when the science of the problem is clearly understood and the costs of proposed actions can be estimated credibly and shown to be cost-effective and beneficial. After considering a number of interesting proposals,¹⁸ at subsequent meetings in Montreal these parties agreed on arrangements by which \$160-240 million will be raised over three years for specified treaty purposes to be disbursed through the World Bank with UNEP and UNDP also serving as executing agencies.

The approval in November 1990 by 25 countries in Paris of a new Global Environmental Facility (GEF) as proposed by the World Bank, UNDP and UNEP addresses "additionality" even more broadly. This new facility arose from a French and German proposal that a new special facility be set up alongside - but separate from the World Bank "soft loan" affiliate, IDA - with a target of \$1.5 billion for concessional aid devoted to preservation of natural resources, protection of atmosphere, energy efficiency, and other activities supportive of sustainable development. As agreed in late 1990, the Facility has four broad objectives that support protecting the global commons:

1. to support energy conservation, the use of energy sources which will not contribute to global warming, forestry management, and reforestation to absorb carbon dioxide, in order to limit the increase in greenhouse gas emissions;
2. to preserve areas of rich ecological diversity;
3. to protect international waters, where transboundary pollution has had damaging effects on water purity and the marine environment; and
4. to arrest the destruction of the ozone layer, by helping countries make the transition from the production and use of CFCs, halons, and other gases to less damaging substitutes.

The GEF will provide concessional funding for investment projects and related activities in these four global environmental areas in what is explicitly a "pilot program to obtain practical experience in promoting and adopting environmentally sound technologies and in strengthening country-specific policy and institutional frameworks to support prudent environmental management. It also will provide operational information relevant in formulating other global conventions and in advancing the agenda that governments will be addressing at the UN Conference on Environment and Development in June 1992."³

This new facility is to be operational by mid-1991 and will be given overall policy guidance by participating countries. Thus, as the recommendations being prepared for UNCED approach final form, initial experience with both these two new mechanisms will be available. All such agreements will greatly assist the further elaboration of funding mechanisms during the preparations for UNCED, but they will not remove the issue of "additionality" from controversy - or the related issue of "conditionality"; indeed, it is likely to be a principal issue requiring attention in UNCED preparations.

Although the need for new funding is widely recognized, and has been advanced by many "donor" countries, it is far from being accepted as an explicit premise by some of the major industrialized countries. And there continues to be a general disposition not to create new funding organizations or unnecessary and potentially competitive duplication of funding functions as amongst existing organizations.

In order to meet renewed developing country calls for "additionality" it may be politically desirable for both industrialized and developing countries that any such "additional" resources be provided under a label that is clearly identified with "environment." This would help to satisfy the developing countries' demands that such funds be "additional" to current development assistance flows. At the same time identifying such funds with the purpose of

safeguarding the global environment may make the provision of such assistance more acceptable to the publics and legislators of the industrialized countries expected to contribute these funds.

It is important to bear in mind in this regard that the creation of new "funds" does not necessarily require establishment of new fund management organizations, indeed the tone of recent declarations favors the use of existing mechanisms. It would seem to be entirely feasible for existing fund management organizations such as the World Bank, UNDP and the UNEP Fund to manage any new international funds that may be established to address environmental and environment-related development needs. Bilateral flows would remain the responsibility of individual governments and existing mechanisms such as CIDIE and OECD/DAC might have coordinating roles to play.

There may be political or other reasons for establishing totally new funding organizations for general environmental purposes or for a specific issue, such as climate change. But this would normally be seen as risking reduction in cost-effectiveness and an increase in competition and overlap as amongst the several separate organizations that would be dispensing funds from the same basic sources.

5. Recent Estimates of Amounts Needed for Sustainable Development. A number of studies have estimated the costs involved in various fields related to sustainable development, including earlier work done in connection with the 1977 UN Conference on Desertification. All such estimates would require further precision before they could become the basis for considering new financial or institutional implications. Nonetheless, the amounts involved, even if very preliminary in nature, are instructive.

Desertification estimates. For example, in the 1987 ACC Report cited above, the annual cost of implementing the Plan of Action to Combat Desertification was estimated to be in the order of ~~\$24~~ billion, compared with \$26 billion per year in losses incurred as a result of desertification. Various mechanisms were put in place by UNEP and UNDP but new significant funds did not materialize.

Montreal Protocol estimates. Original estimates of the costs to developing countries for compliance with the Montreal Protocol ran as high as \$400 million annually to the year 2000, essentially to cover the costs of technology transfer. The current estimates of ~~\$200~~ million are for the initial three-year period and subject to review in the light of experience.

Climate change estimates. The IPCC First Assessment Report cautioned that "sound policy analyses is inadequate" in part because of "uncertainty with respect to the costs, effects on economic growth, and other economic and social implications of specific response options or groups of options."³⁰ The earlier McKinsey analysis commissioned by the Government of the Netherlands that was circulated in the IPCC pulls together a number of estimates as to annual capital costs to reduce greenhouse gas emissions by five percent relative to volume in the year 2005. These suggest that 1985-2005 annual capital costs are highest for the countries of Eastern Europe (\$27 billion), lowest for OECD states (\$18 billion), with the rest of the world in between (\$22 billion). Seen as a portion of Gross Domestic Product (GDP) these differences are even more striking.

To meet the funding requirements for a cooperative program to achieve reductions in Greenhouse gas emissions, a gradual, phased approach was outlined in this analysis suggesting an international clearinghouse mechanism capable of switching financial flows between various activities to reduce emissions or take greenhouse gases out of circulation. Such actions might be included as funding to encourage CFC substitutes, expanded forest management, fossil fuel energy conservation, and agriculture practices calculated to reduce emissions, as well as expanded monitoring and research. Three possible sources of funding were considered: voluntary financing, using existing bi- and multilateral channels; financing based on international assessments ("burden sharing"), in principle via a multilateral institution; and a mixed approach, differentiating the use of financing channels according to the overall approach.

Sustainable development estimates. A recent summary (by the former Secretary-General of WCED) based on estimates by the World Bank and by the WorldWatch Institute foresees an average annual requirement between 1990 and 2000 of \$124.6 billion, for a total by the year 2000 of \$1,371 billion.³¹

6. Where Will the Money Come From? Present international developments give new credibility to the concept of harnessing savings as a result of reduced military budgets for more constructive purposes, and a number of proposals on this are outstanding. But as the above figures suggest, new demands for capital investment to combat desertification, protect stratospheric ozone, and slow climate warming, not to mention mounting pressures in all countries to improve national infrastructure and economic conditions at home

already seem likely to capture most of the savings from reduced budgets for military arms.

Thus, even under new and more hopeful conditions it seems likely that the demands for additional resources for the transition to sustainable development, as judged by WCED -

"will not be easy to come by if the international organizations through which they flow have to continue to rely solely on traditional sources of financing: assessed contributions from governments, voluntary contributions by governments, and funds borrowed in capital markets by the World Bank and other international financial institutions."

It was these considerations that led WCED to suggest study of "new approaches as well as new sources of revenue for financing international action in support of sustainable development." Even if such proposals might not have appeared politically realistic in 1987, in WCED's view, "the need to support sustainable development will become so imperative that political realism will come to require it."

One of the 1987 WCED recommendations called for further study on the possibility of a "World Conservation Bank" which, with support from UNDP and others was undertaken by the WRI and presented in its report, "Natural Endowments: Financing Resource Conservation for Development."²²

This report recommends four options:

- creating an International Environmental Facility (IEF) to identify urgently needed and appropriately designed conservation programs and to organize support for their preparation, implementation, and expansion;
- mobilizing the private sector through the establishment of pilot investment programs, called "Ecovests," to help leverage private capital for ecologically beneficial projects;
- linking international debt relief and conservation initiatives through expanded use of the debt-for-nature concept;
- taxing emissions of carbon dioxide, chlorofluorocarbons, and other greenhouse gases, with the revenues going in part to a Global Environmental Trust Fund.

7. "Automaticity" in Funding. Various proposals have been made from time to time for automatic means of financing international environmental and environment-related development programs. WCED noted that a growing list of new sources of potential revenue had been identified including:

- revenue from the use of international commons (from ocean fishing and transportation, from sea-bed mining, from Antarctic resources, or from parking charges for geostationary communications satellites, for example);
- taxes on international trade (such as a general trade tax; taxes on specific traded commodities, on invisible exports, or on surpluses in balance of trade; or a consumption tax on luxury goods); and

- international financial measures (a link between special drawing rights and development finance, for example, or IMF gold reserves and sales).

Recently, these include proposals for levies or tradable permits on emission of greenhouse gases, particularly CO₂, possible levies on movements of tropical timber in international trade or on transportation over international commons areas, e.g., the oceans and atmosphere.³¹

While there has never been any serious disposition on the part of governments to consider these issues, WCED recommended they be given further study. It is likely that the matter will receive renewed international attention in relation to the current dialogue on potential sources of funding for international environmental cooperation and meeting related needs of the developing countries.

As noted above, the most specific studies of the need for new sources and mechanisms of funding currently underway are in the context of the means to support the speedy introduction of substitutes for CFCs under the Montreal Protocol, and in connection with negotiations for a Framework Convention on Climate Change and the continuing work of the Intergovernmental Panel of Experts on Climate Change (IPCC). Additionally, there is the experience of the UN Convention on the Law of the Sea - UNCLOS - on which to draw; an international authority with a mandate to collect revenue for exploration and exploitation of resources in the international area beyond national jurisdiction.

8. Thoughts About Funding. It has been useful to distinguish between "additional" financing that was foreseen in 1972 to encourage developing country participation in international environmental programs - to be met by UNEP's Environment Fund, on a catalytic basis - and "additional financing" foreseen but not acted on to help them incorporate environmental considerations in national development planning and projects; now seen as encouraging their transition to "sustainable development." New requirements for additional funds have recently been expressed to encourage developing countries to participate in international programs to reduce global risk and safeguard the "global commons" when these actions do not contribute to the advancement of national development planning in normal terms.

Clearly the substantial increases in international programmes of co-operation in respect of global environmental issues will require substantial increases in the funding available to developing countries if they are to play

active roles. As various "greenhouse" scenarios show, their cooperation and participation may be vital to the success of any effort to slow global heating; as this becomes better recognized it will be seen to be in the interest of industrialized countries to ensure that increased funding is available to support their participation in whatever cooperative programs are agreed in UNCED's "Agenda 21" or in a climate convention.

In terms of national efforts a distinction needs to be made between funds for technical assistance, and for capital costs of incorporating environmental factors into development projects.

It would seem the needs for participation in international environmental programs and in their negotiation might best be met at the international level by increased contributions to the Fund of UNEP, or some other central mechanism such as by the UN itself (as currently the case for developing country participation in the climate convention negotiations), or to continue the practice of setting up separate Trust Funds administered by UNEP or other agencies on a regional or sectoral basis.

Increased needs for international support to technical assistance and other means to strengthen human resources for national development could be met by substantially increased funding to UNDP, perhaps through a separate environmental "window."

But the needs of a capital nature to support national development on a sustainable basis could be met through the establishment of a new environment-related fund or broadened GEF managed within the framework of the World Bank, much as IDA and IFC are currently managed as separately identifiable entities within the same management framework.

While the World Bank may be understandably concerned that establishment of a new capital fund for environment-related development may compete with new funds they need for replenishment of IDA, it would nevertheless seem logical that it assume this additional responsibility which, in any event, would have to be very closely related to the World Bank's role as the principal source of multilateral funding for development.

It has also been suggested that there should be greater cooperation and coordination between UNDP's environment-related funding activities and the UNEP Fund and that more coordination among other bilateral and multilateral funding agencies would be useful. The OECD/DAC and the CIDIE have already

taken steps within their jurisdictions to facilitate such coordination and could undoubtedly do more.

Although the 1980 Declaration of Environmental Policies signed by the heads of international financing organizations does not constitute "international law", these principles, if put into more effective practice, could have profound effects, especially under current conditions of heightened ODA influence. As noted earlier, CIDIE provides a mechanism for exchanging information among its members and reviewing performance. While no corresponding inter-state mechanism exists, governments have the authority through their representation on the governing bodies of Bretton Woods and other CIDIE member organizations to support these same principles. Despite the efforts of some governments to improve the environmental sensitivity with which large, existing financial funds are handled, no such general call has been heard; initiatives of this sort seem more often to rest with the heads of these international organizations, while government representatives of all persuasion seem to prefer to focus their attention on the creation of new and "additional" resources.

10. INSTITUTIONAL OPTIONS FOR NEW FUNCTIONS.

It may be useful at this point to recall the criteria governments accepted in 1971 on the institutional aspects of the Stockholm Action Plan as listed in Chapter 1; they are probably as valid today for the mix of environment-and-development issues as they were then and may be summarized as follows:

- first agree about what needs to be done;
- rely on existing organizations capable of carrying out agreed functions;
- develop networks with linkages and "switchboard" mechanisms rather than a global "super agency";
- keep action flexible and evolutionary in the face of incomplete knowledge;
- stress co-ordination and rationalization of various international organizations to avoid overlap and duplication and to assure effective use of scarce resources;
- any policy centre expected to influence and co-ordinate the activities of other agencies should not itself have operational functions which compete with cooperating organizations;
- strengthen regional capability;
- keep the United Nations the principal centre for international co-operation;
- strengthen and reinforce the entire United Nations system;
- be mindful of the wide variation of environmental conditions among nations.

Insofar as environmental considerations are concerned, any review of institutional arrangements should take into account the most recent statement of functions governments expect to see UNEP performed, together with recent proposals by government leaders and experts. In calling for a strengthened role for UNEP as the "central catalyzing, co-ordinating and stimulating body in the field of the environment within the United Nations system" UNEP's Governing Council specified the following five functions of UNEP's Governing Council for particular attention:

- to promote international cooperation and recommend policies to this end;
- to provide general policy guidance for direction and coordination of environmental programs within the UN system;
- to review the global situation and identify significant emerging environmental problems for action by governments;
- to promote contribution of scientific and other professional communities to acquisition, assessment and exchange of knowledge and information;
- to continue reviewing impacts of environmental policies on developing countries, including additional costs incurred by them in carrying out environmental programs and projects.

These closely resemble the original functions given to the Council by the Assembly in 1972, omitting only the Council's oversight responsibilities; reviewing program implementation within the UN system, and approving uses of the Environment Fund.

Many current proposals address one or more of these functions, and other possibilities can be imagined, some of which could be put into effect quickly. For example, while some institutional arrangements - such as setting up a sessional committee of the General Assembly - can be made by decision of the General Assembly, and could therefore be put into effect even before the 1992 Conference, other arrangements, on the face of it, might require amending the UN Charter, and are only feasible in the long term, but could be set in motion by action at the 1992 Conference.

At this stage there is growing recognition of the need for a new or improved means of considering the major policy implications of environment issues and their relationship with such other important areas as protection of the global commons, and international security and economic cooperation. While these issues might be dealt with to some extent through existing bodies such as ECOSOC and the General Assembly, various ideas recently advanced for the establishment of a forum that can more effectively meet this need illus-

trate the degree to which the momentum towards the creation of new institutional machinery in the environmental field has developed.

Clearly, UNEP occupies a special and central role among the existing multilateral institutions dealing with environmental issues and there appears to be wide consensus on the need to strengthen it and provide it with much greater support, a stronger mandate, and an enhanced status with the UN system.

Some suggest that it should be a specialized agency. Others argue that this would be moving in the wrong direction by sectoralizing the environment at a time when what is needed is greater coordination and integration with the agencies responsible for other sectors, the policies and activities of which impact the environment. This would suggest strengthening UNEP as part of the central structure of the UN system - perhaps also of the Bretton Woods institutions - rather than as a separate agency. The question of how the Fund of UNEP might be more closely related to UNDP to support national requirements needs to be considered. How this relates to additional funds to reduce global risks, whether centralized as in the GEF, or distributed among separate treaties, also needs study. But whatever may be done in this respect, the amount of funding required to ensure full participation by developing countries in international agreements and programs should be greatly increased.

The foregoing comments have focussed primarily on institutional and funding needs at the global level, with particular reference to the UN system. But all international environmental cooperation has its roots in the national institutions and programs of participating countries, whether governmental or non-governmental in character. The roles of scientific, technical and research organizations and of private industry are of special and growing importance. A wide variety of regional organizations can also be called on to contribute to international cooperation in respect of environment and environment-related development issues. All these activities should take place within the broad framework of global cooperation established by the UN, whether or not they are under direct UN control or supervision. The scope of work now taking place under the authority of the UNCED preparations process will show the practicality of this approach if governments choose to institutionalize it in 1992.

11. PREPARING THE 1992 CONFERENCE

Even this cursory review of developments since the 1972 Conference shows that many changes have taken place, perceptions have changed, there are greater insights and understanding of natural processes, and how they can be interfered with by human actions, with potential local and global impacts. And many choices exist for dealing with these problems in ways that may also produce multiple, local benefits in addition to global ones. Although it may be argued that not enough is being done to reduce environmental risks, nor to improve living conditions around the planet, certainly a lot more is going on throughout the UN system and beyond than is generally recognized.

There is already the expectation that the 1992 Conference will be "action oriented" and should produce more than declarations, "action plans" for future actions, and the like. As the preparatory process leading up to the 1972 Stockholm Conference demonstrated, it is possible with foresight to use the preparatory process itself to produce tangible, completed action by the time of the conference. For example, work already underway on various draft conventions can be accelerated to be ready for early approval and signature, just as they were in 1971 when Conventions on "Protection of the World Cultural and Natural Heritage" and on "International Trade in Endangered Species of Wild Fauna and Flora" were speeded in 1971 so as to be ready for endorsement at Stockholm. An even better example of action initiated and completed during the preparatory process was the negotiation of a global treaty on ocean dumping which was conducted as part of the Stockholm preparatory process itself under the authority of that Prepcom on the proposal of the Secretary General of the Stockholm Conference in February 1971.⁹⁴

Another example of action completed before that conference was the "General Principles for Assessment and Control of Marine Pollution" that were collectively endorsed at the Stockholm Conference "as guiding concepts for the Conference on the Law of the Sea" - then about to get underway.⁹⁵ As noted in a recent Report of the Secretary General on "Law of the Sea; Protection and Preservation of the Marine Environment", these principles, along with three from the Stockholm Declaration, "had an immediate and direct impact" on draft articles drawn up by the Conference on the Law of the Sea.⁹⁶

Comparable work now underway on possible conventions on climate change, and on biodiversity, offer similar opportunities for the UNCED preparatory process to contribute to or strengthen these parallel processes that will shape new institutional approaches at UNCED. As noted earlier, preparatory

work outside these negotiations can prepare the way programmatically for future agreements in these negotiations, and new institutional arrangements can be created by political agreements - whether or not treaty agreements are ready for approval at UNCED. Indeed, in all fields currently considered ripe for treaties to be signed at UNCED, there is a great deal that can be accomplished through international cooperation that need not and should not be delayed until treaty negotiations reach success. Effective regimes can be established politically when there is a will.

Clearly the 1992 conference must ensure more than the pro forma exchanges of information that too often characterize the independent, compartments within the development community, and between it and the 'environmental' community. These were identified by WCED as obstacles to sustainable development and a prime task for 1992 will be to translate the concept of sustainable development into the specific measures, policies and practices that will give practical effect in the principal areas of economic and social life. To accomplish this may require intensifying the processes of consultation and cooperation amongst the principals directly concerned with each issue - representatives of governments, inter-governmental and non-governmental organizations meeting face to face to resolve differences and agree on common actions at a scale appropriate to the action needed.

UNEP's experience in producing "SWMTEP" documents shows the hurdles that need to be surmounted to enlarge participation beyond the environmental community in any international planning enterprise, especially if such "joint planning" exercises are to be more than pro forma and take place early enough in the process so that plans can still be discussed and adjusted, rather than defended. These problems become more tractable as one moves from global to regional to national to local levels. For example, while government 'experts' are easily absorbed and can make valuable contributions to such consultations, practical problems can arise when government 'representatives' become involved. Even at the global level the non-availability of documents in official languages is rarely a problem for interagency bodies accustomed to finding a common language. But severe budgeting and scheduling problems arise if government representatives require - as is their right - full interpretation and translation services. This is clearly impractical at the initial, critical phase of collective planning. The current practice of setting up

working parties on major issues before UNCED shows one way of tackling this problem.

Existing interagency bodies such as the DOEM and CIDIE set up by international organizations for purposes of co-ordinating and strengthening their own policies, programs and procedures are capable of keeping pace with Prepcom needs, though even here, the budgetary implications of frequent meetings and preparation of new material strain existing resources. Regional intergovernmental organizations inside and outside the UN system that are located in developing country regions - like the OAU in Addis, or the Asian Development Bank in Manila - and non-governmental organizations in these regions are obviously handicapped.

While a certain level of early, face-to-face meetings is necessary if joint planning, rather than sterile coordination, is the goal, much more could be done to encourage the use throughout the UN system of "electronic conferencing" between cooperating organizations - especially during the UNCED preparatory process - as a means of reducing delays and expenses for travel.

A particular group of international, non-governmental organizations whose contributions are self-evident but who lack sufficient means to take part except on an ad-hoc basis, is the international scientific community, especially those disciplines coming together under ICSU, and various committees such as SCOPE, its Scientific Committee on Problems of the Environment. The value of these contributions in terms of their scientific content is well known, but less known is the fact that SCOPE organized and convened a meeting of scientists from developing countries in Canberra in 1971 that was cited by the General Assembly for its usefulness in reflecting concerns of developing countries.⁷ ICSU and SCOPE's work before and since the Stockholm Conference has been funded by outside sources, including UNESCO and UNEP, but these are diminishing and, like many other international NGOs, these groups have no "core" budgets to draw on, and are therefore hampered when asked to tap the resources of their constituent unions to assist a fast-moving process such as required for the 1992 conference.

IUCN is another organization facing similar problems along with many other NGOs and PVOs at the international level, as well as the national and "grass roots" levels whose active participation at the national level could contribute to the actions governments will consider in 1992, as well as their implementation thereafter in "Agenda 21". The concept of sustainable develop-

ment was significantly advanced in the World Conservation Strategy of 1980 and a number of National Conservation Strategies have sprung up since then that could strengthen national contributions during the current preparatory process.

Whereas UNEP and UNESCO and other agencies provide limited funds to these groups to carry out specific project work, it would be useful to have funds available outside normal project funds from UN agencies and programs so that properly qualified groups could play a more effective role during the preparatory period as well as at the 1992 conference itself, and thereafter.

Many of the institutional options governments will consider in 1992 will by then have the benefit of experience based on specific work now underway, such as the IPCC - now being prolonged to support ongoing negotiations, and the operation of funding arrangements under the Montreal Protocol and the GEF.

Just as members of UNEP's Governing Council decided in 1989 "to mandate the Bureau of its fifteenth session to meet with the Bureaux of counterpart organs of UN system Specialized Agencies and other organs to develop more positive and collaborative relationships", the Assembly could encourage similar relationships between the UNCED Preparatory Committee and other governing bodies, inside and outside the UN system, albeit with a broader, environment-and-development scope.

Other examples of experimental work underway are referred to in the "Views expressed by the Governing Council of UNEP on efforts towards sustainable and environmentally sound development".

For example, the Council records its welcome for the ACC initiative to "test and apply knowledge available within the UN system for the incorporation of environmental considerations into national development planning and policy formulation," and the use of inter-agency mechanisms to consider "environmental guidelines and their application to the operational aspects of the system."

Similarly, the Council noted the need for "developing ways of incorporating the environmental dimension in development planning and policies, and of planned experimentation in selected countries," including the need that "National accounts must include accounting for environmental resources, not just financial resources." Progress in the UN Statistical Commission on current proposals for environmental accounting within the framework of the System of National Accounts might also be taken into account during preparations for 1992.

Reviewing reports received from governing bodies the Council noted that "energy and transport issues, despite their great importance for an environmentally sound and sustainable development, have received relatively little attention in the reports from governing bodies of UN organs" and suggested "the reason might be the lack of UN bodies with an integrated responsibility for these two fields of policy." This seems to fit the diagnosis contained in the WCED report and raises the question of whether, as part of the preparatory process for the 1992 conference, steps might be initiated to examine this issue further and perhaps recommend changes, without awaiting the conference itself.

These are a few of the many activities routinely reported to the General Assembly which warrant evaluation during the preparatory process for 1992. Many other activities conducted under the authority of governing bodies of UN system organizations and agencies can also contribute significantly to the decisions of the conference. But to ensure that all of these contributions are fully brought to bear and utilized will require new levels of inter-agency and inter-governmental cooperation during the preparatory process and this will also have important staffing and budgetary implications. The preparatory process itself will provide experience that may deserve to be applied in the future.

It will be a particular challenge to develop new and improved means of encouraging NGO contributions to the preparatory process for 1992 in ways that creatively compliment, supplement and inter-act with the official preparatory process. This offers the prospect for a unique new alliance between the governmental and non-governmental components in the preparatory process that can also be applied in the future.

UNCED in 1992 will present a unique opportunity to strengthen institutional linkages between environment and development and build a durable political basis for increased international support and economic cooperation to replace "foreign aid" in a new framework for international security.

But for all that can be done at the international level, the future of these issues ultimately rests on an informed, educated public with good leadership. Many international mechanisms are in place and are able to carry out any number of services for the governments they are anxious to serve. A key missing element however is policy set by governments at a higher level than the sectoral interests that govern most of these institutions today, and sufficient resources to carry out policy objectives.

The combined total resources available to the UN system and the Bretton Woods organizations have a potential for great influence, especially considering indebtedness and the current lack of private investment in developing countries. But there is no single intergovernmental forum to set policies or goals, even at the highest level of generality, and so long as the UN system reaches decisions on a one-country-one-vote basis, and Bretton Woods institutions on a weighted vote basis it is difficult to imagine how policies could be made uniform without jeopardizing the ability to raise significant international funding in private financial markets.

Sooner or later, however, the linked issues of environment and development will put pressures on governments to improve the harmony, or at least compatibility, between policies and strategies of various parts of the UN system with those of the Bretton Woods organizations. This calls less for creating new institutions than it does for adjusting the relationships, mandates and resources of existing ones. The recent decisions to set up a new fund with several hundred million dollars under the Montreal Protocol and the GEF now being established at the World Bank are examples of new mechanisms to make existing institutions more effective at the task of helping governments work together to reduce known global risks.

Each of these only became feasible after the analytical work was well advanced to identify actions needed and estimate their costs, much like the work now before Prepcom. This suggests that sectoral recommendations along with careful estimates for their cross-cutting implications should be developed speedily to serve as a basis for consideration of institutional relationships.

Although the sectoral compartments of the UN system challenge effective coordination - especially when both environment and development action is called for - perhaps the deliberate autonomy of the system as laid out in Articles 57 and 63 are more appropriate for the task of bringing global resources to bear at the national level where the transition to sustainable development must prosper, and where countless decisions are reached daily that drive global change.

As a new world order is set in motion by the relaxation of cold-war constraints and a new awareness of human influence on global changes, the best opportunity to consider policy and institutional implications of the profound changes underway will be in Brazil in June 1992. The process of getting there will itself be instructive, and perhaps precedental.

Stratospheric Ozone Depletion:

Background to the 1977

World Plan of Action on the Ozone Layer

- 1971 During preparations for the Stockholm UN Conference on the Human Environment (June 1972), attention focussed on risks presented by second generation SSTs, and fertilizers, see for example, SMIC - the MIT Study of Man's Impact on Climate and related work.
- 1972 The Stockholm Conference 'Pollutants' paper called for research on "stratospheric transport and distribution of ozone . . . as a result of high flying aircraft" to understand "the influence of human activities on the global climate."
- 1973 Address by Executive Director Maurice Strong on 12 June to the First Session of UNEP's Governing Council:
- "The environmental dialogue and the attendant discussion of various 'Doomsday' scenarios imply the existence of certain 'Outer Limits' to changes which man's activities may engender in some elements of the biosphere. If exceeded, these may endanger the continuance of human life on this planet. For example, possible outer limits have been pointed to in relation to the generation of heat, the carbon dioxide content of the atmosphere, the ozone content of the stratosphere, and the health of the oceans."
- 1974 UNEP Inter-governmental Meeting on Monitoring in February; extract from US "Proposal for Initial Implementation of Global Environmental Monitoring":
- "4.1 Monitoring for climate change must include . . . Natural and man-made sources, sinks, transports, and transformations of climate change agents such as heat (latent and direct), carbon dioxide, water vapor, ozone, and aerosols;"
- "UNEP . . . could develop a progressive program for the application of space-acquired data from advanced experimental satellites . . . Nimbus F, 1974 . . . sensor payload capability for the global measurement of . . . ozone content, . . . , Nimbus G, 1977 . . . solar ultraviolet radiation, . . . and ozone concentration;"

1975 Report of Third Governing Council (April-May 1975):

"General support was expressed for the activities proposed in the area of climatic change . . . for the programme proposed by the Executive Director in the area of possible risks to the ozone layer . . . emphasis should be given to techniques and instruments for the measurement of ozone levels and of the parameters affecting the ozone layer."

Decision 29, 2 May 1975: "requests the Executive Director . . . to treat the section of 'Outer Limits' as part of the functional task 'Environmental Assessment: Earthwatch';"

1976 Review of the Status of the Program (26 Jan 1976); this paper, prepared for the 4th Council session in April, outlined the UNEP strategy for "Risks to the Ozone Layer" based on three elements:

"(a) information will be compiled on the work so far done in monitoring the ozone in the stratosphere and the research aimed at assessing the risks to which the stratosphere is exposed;

"(b) a decision would then be made on the action to be taken to improve our understanding of the ozone processes and the effects of man's activities on the vital layer;

"(c) emphasis should be given to techniques and instruments for the measurements of ozone levels and of the parameters affecting the ozone layer.

"WMO has accelerated its ongoing activities related to the ozone layer. In particular, UNEP and ICSU were invited to participate in a session of a WMO working group on stratospheric and mesospheric problems. The session supported a proposal by UNEP to develop a programme which would contribute to the implementation of all the elements of the strategy. . . ."

The strategy called for a "state of the art review," a "coherent program of monitoring of total ozone and its vertical distribution, determination of long-term trends in exposure to UV radiation at the surface, identification of research gaps, and . . . examination, in the light of the review of the state of the art, of the need and justification for recommending any national and international controls over the release of man-made chemicals."

Detailed attention was given to aircraft, chemical fertilizers, and fluorocarbons. The OECD Environment Committee had already decided to collect data on the production and use of fluorocarbons in the OECD countries and the Executive Director had requested similar data from non-OECD countries.

Council Decision 65 (13 April):

"Requests the Executive Director to convene a meeting of appropriate international, governmental and non-governmental organizations to review all aspects of the ozone layer, identify related ongoing activities and future plans, and agree on a division of labor and a coordinating mechanism for, inter alia, the compilation of research activities and future plans and the collection of related industrial and commercial information, and to report to the Governing Council at its fifth session on the results of the meeting." (This decision was based on a US proposal.)

OECD Environment Committee; a 13 December note by the U.S., "Fluorocarbon Regulation in the U.S.," outlines the findings of two Academy reports on Halocarbons released in September, one of which - the "Tukey Report" - "anticipates the 'almost certain' need for 'selected regulation of their releases' within the next two years", and the decision by EPA, FDA and CPSC that, "it is not appropriate to wait any longer to start the regulatory process" against "non-essential uses of fluorocarbons."

1977

The UNEP Meeting of Experts Designated by Governments, Intergovernmental and Non-governmental Organizations on the Ozone Layer adopted on 9 March the "World Plan of Action on the Ozone Layer" setting forth 21 agreed actions in the following categories:

I. The natural ozone layer and its modification by man's activities:

1. ozone monitoring
2. solar radiation monitoring
3. simultaneous species measurements
4. chemical reactions
5. development of computational modelling
6. large-scale atmospheric transport
7. global constituent budgets

II. The impact of changes in the ozone layer on man and the bio-sphere:

8. UV-B radiation monitoring
9. development of UV-B instrumentation
10. UV-B research promotion
11. statistics on skin cancer
12. research on induction mechanisms
13. other health aspects
14. responses to UV-B
15. terrestrial ecosystems
16. aquatic ecosystems
17. other agricultural effects
18. development of computational modelling
19. regional climate

III. Social-economic aspects:

20. production and emission data
21. methodology for comprehensive assessment.

UNEP was given "a broad coordinating and catalytic role" with the help of a "Coordinating Committee on the Ozone Layer" and requested to issue half-yearly bulletins.

The Action Plan was based on papers prepared for the March meeting by agencies and programs of the UN system (WMO, FAO, WHO, ICAO, the UN), by the OECD, and by non-government organizations including ICSU/SCOPE and the International Chamber of Commerce on behalf of the Manufacturing Chemists Association, and as well by a number of governments and national institutions.

An interesting example of the level of detail was the recommendation in the WMO paper that,

"the total-ozone station at Halley Bay (U.K. station in Antarctica) be reactivated to provide a back-up to Amundsen-Scott (Halley Bay provided excellent total-ozone data until 10 years ago)."

Report of the 5th Session of the UNEP Governing Council (May): "The Executive Director proposed - and the Council approved - the following goal for the programme by 1982:

'agreement on the principles which should guide states in their interrelations in respect of . . . weather modification and risks to the ozone layer, . . .'

Decision VI:

"1. Calls upon the Executive Director to initiate action to coordinate and integrate research efforts related to the ozone layer, and to establish a Coordinating Committee on the Ozone Layer, which should meet for the first time late in 1977;

"2. Urges Governments, international agencies and others to support the World Plan of Action on the Ozone Layer and to support and participate in the Coordinating Committee on the Ozone Layer."

compiled from personal papers
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End Notes

1. Development and Environment: The Founex Report: In Defense of the Earth, The Basic Texts on Environment, UNEP Executive Series 1, Nairobi, 1981.
2. There are of course many variations on voting procedures in the UN system ranging from special voting powers in the UN Security Council and Trusteeship Council to tripartite voting rights in the International Labor Organization (ILO) where non-governmental representatives of employers and workers also have voting rights.
3. Reference is made here to the "Study of the Capacity of the United Nations Development System", UN, 1969, UN document JIU/REP/85/9, and Assembly resolution 32/197 of December 1977.
4. A/CONF.48.11, 10 January 1972
5. A/CONF.48/11, 10 January 1972, para 7
6. document A/8783 and Add.1, Add.1/Corr.1 and Add.2.
7. The Vienna Convention for the Protection of the Ozone Layer, March, 1985, and the Montreal Protocol on Substances that Deplete the Ozone Layer, September, 1987.
8. The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, March, 1989.
9. Governments at the Stockholm Conference adopted recommendations in five subject areas - human settlements, natural resource management, pollutants of broad international significance, educational-informational-social and cultural aspects, and, environment and development. The institutional implications from these recommendations were considered in a sixth subject area on "International organizational implications of action proposals." Additionally, the Conference approved the Stockholm Declaration on the Human Environment.
10. The "Framework for environmental action", on which this was based, is described in the Report of the Conference, UN Doc. A/CONF.48/14/Rev.1, 1973, Chapter 3.
11. In December 1988, UNSCEAR was commended by the Assembly for its 33-year contribution to "wider knowledge and understanding of the levels, effects and risks of atomic radiation and for fulfilling its original mandate with scientific authority and independence of judgement" (GA Res 43/55).
12. A recommendation in the 1972 Stockholm Action Plan called for GESAMP to assemble scientific data and provide advice on scientific aspects of marine pollution especially those of an interdisciplinary nature. The initial result was publication by UNESCO in 1976 of The

Health of the Oceans by Professor E. D. Goldberg. Thereafter, as a result of an inter-agency recommendation UNEP was asked to take the initiative to shape a continuous authoritative review and assessment of the health of the oceans. This led to preparation by GESAMP of the first review of the marine environment in 1982 coordinated by Professor Gunnar Kullenberg. The second review was published in 1990 in UNEP's Regional Seas Reports and Studies Series, Number 115 GESAMP: The State of the Marine Environment together with technical annexes and accompanying reviews of ten regional seas. In summarized form it is available in World Resources 1990-91 published by the World Resources Institute in cooperation with UNEP and UNDP.

13. Texts of a number of early treaties relating to protection of fauna and flora, wildlife, whales, Fisheries, Birds, Rivers can be found in Selected Multilateral Treaties in the Field of the Environment by Alexandre Charles Kiss; UNEP Reference Series 3, 1983.

14. See for example, the 1981 "Geneva Guidelines on Off-Shore Mining" and the 1985 "Montreal Guidelines for the Protection of the Marine Environment against Pollution from Land-Based Sources" that states and international organizations are encouraged to take into account when developing international agreements in this field. The UNEP series on "Environmental Law - Guidelines and Principles" also includes agreed guidelines on "Weather Modification," "Banned and Severely Restricted Chemicals," and "Environmental Impact Assessment."

15. For a useful survey of this experience, see Lessons Learned in Global Environmental Governance by Peter H. Sand, a Report by the World Resources Institute, 1990.

16. These regional conventions and protocols are the Barcelona Convention and Protocols of 1976 and Athens and Geneva Protocols of 1980 and 1982; the Kuwait Convention and Protocol of 1978; the Abidjan Convention and Protocol of 1981; the Lima Convention and Agreement of 1981 and Quito Protocol of 1983; the Jeddah Convention and Protocol of 1982; the Cartagena Convention and Protocol of 1983; the Nairobi Convention and Protocols of 1985; and the Noumea Convention and Protocols of 1986. For a complete review of all texts, see "Marine Environment Law in the United Nations Environment Programme" by Peter H. Sand; Tycooly Publishing, 1988.

17. For more information on this approach see "Guidelines and principles for the preparation and implementation of comprehensive action plans for the protection and development of marine and coastal areas of regional seas", publication No. 15 in the UNEP Regional Seas Reports and Studies, 1982.

18. The World Environment 1972-1982, A Report by the United Nations Environment Program, edited by Martin W. Holdgate, Mohammed Kassas and Gilbert F. White, Tycooly International Publishing Limited, Dublin, 1982.

19. A number of publications review the present status of planing for IGBP, see, for example, "Mission to Planet Earth Revisited; an Update on Studies of Global Change" by Thomas F. Malone and Robert Corell in Environment, Vol. 31, No. 3, April 1989.
20. Bergen Declaration adopted 16 May 1990, para 7. Note that this Ministerial Conference was a regional preparatory meeting for UNCED.
21. "International Decade for Natural Disaster Reduction", Report by the Secretary General, document A/44/322 of 20 June 1989, paragraph 22.
22. UN GA Resolutions 2849 and 2850 of 20 December 1971.
23. UN GA Resolution 38/161 of 19 December 1983.
24. GA Resolution 42/186 of 11 December 1987 on the Environmental Perspective to the Year 2000 and Beyond, operative paragraph 4.
25. As used here, "ODA" refers to financial flows to developing countries and multilateral institutions provided by official agencies which have as their main objective the promotion of economic development and welfare of developing countries and are concessional in character with a grant element of at least 25%. Ordinary lending by the World Bank, except by its IDA, do not qualify as ODA. For a complete review of related terms see "Twenty Five Years of Development Cooperation", OECD Development Assistance Committee, 1985, pages 171-175, and more recent reports to the Assembly on "Operational Activities of the UN System".
26. These figures are taken from the OECD report in June 1989 on "Financial Resources for Developing Countries: 1988 and Recent Trends".
27. This is the statistical data on operational activities for development for the year 1987 contained in document A/44/324/Add.1 of 7 July 1989)
28. GA Resolution 42/186, 11 December 1987
29. Stockholm Conference document A/CONF.48.11
30. U.S. President Nixon proposed a new fund in his 8 February Message to Congress that would "help stimulate international cooperation on environmental problems by supporting a centralized coordination point for UN activities . . . and bring new resources to bear on the increasing number of worldwide problems through activities such as monitoring and cleanup of the oceans and atmosphere."
31. Declaration of the Hague, 11 March 1989

32. Summit of the Arch; Economic Declaration, 16 July 1989.
33. Statement on Environment, Ninth Conference of Heads of State or Government of Non-Aligned Countries, Belgrade, Yugoslavia, 7 September 1989.
34. The text was draft principle 20, the amendment was proposed by Brazil and, in order not to block adoption of the Declaration by acclamation the matter was referred to the Assembly; see para 331 of the Report of the Stockholm Conference.
35. See, for example, Article XI of the Kuwait Regional Convention for Cooperation in the Protection of the Marine Environment from Pollution, 1978, in which contracting states agreed to assess "the potential environmental effects in any planning activity entailing projects within its territory, particularly in the coastal areas, which may cause significant risks of pollution in the Sea Area (para (a)), and in subsequent paragraphs to develop procedures for disseminating this information and "guidelines in accordance with standard scientific practice to assist the planning of their development projects in such a way as to minimize their harmful impact on the marine environment."
36. Very relevant to this question is the ICSU/SCOPE project, "Scientific Information for Sustainable Development."
37. See Article 4 and Annex II in the Vienna Convention.
38. GA Resolution 42/186 of 11 December 1987, operational paragraph 4.
39. GA Resolution 42/186, 11 December 1987.
40. Paraphrased from UNEP GC Decision 15/1 of 25 May 1989.
41. Document UNEP/GC.15/9/Add.1 of 30 January 1989.
42. Statement of the Executive Director of UNEP, Maurice F. Strong, at the first session of the Governing Council on 12 June 1973.
43. UNEP document UNEP/GCSS.I/7/Add.1, May 1988, para 23.
44. GA Resolution 43/53 of 6 December 1988, operative para 4.
45. Council Decision 15/1, Section II, paras 4 and 5, of 25 May 1989.
46. Four volumes of the World Resources Report have been published so far, the most recent covered the period 1990-91. See also UNEP's Data Report, 2nd Edition, 1989/90 prepared by the GEMS Monitoring and Assessment Center, London, in cooperation with WRI and the UK Department of the Environment, London, published by Blackwell Reference, 1989.

47. Chapter 17, "Conclusions" in "The World Environment 1972 - 1982" Edited by Martin Holdgate, Mohammed.Kassas, and Gilbert White, published for UNEP by Tycooly International Publishing Limited, Dublin, 1982.
48. WCED Report "Our Common Future" Oxford University Press, Food Security chapter, page 133.
49. An Assessment of the Role of Carbon Dioxide and of Other Greenhouse Gases in Climate Variations and Associated Impacts, published by WMO, with UNEP and ICSU, 1985.
50. GA Resolution 43/53, "Protection of global climate for present and future generations of mankind" of 6 December 1988, operative para 5.
51. GA Resolution 45/212.
52. See, for example, UN document E/C.10/1989/12 of 22 February 1989, a Report of the Secretary-General to the Commission on Transnational Corporations entitled, "Ongoing and Future Research: Transnational Corporations and Issues Relating to the Environment"
53. "Patterns of Resource Use, Environment and Development Strategies", UNEP/UNCTAD Symposium, Cocoyoc, Mexico, October 1974. Published in Defense of the Earth, The Basic Texts on Environment, UNEP Executive Series 1, Nairobi, 1981.
54. Preface by Barbara Ward (Lady Jackson) in Banking on the Biosphere?, a study of environmental procedures and practices of nine multilateral development agencies by Robert Stein and Brian Johnson, Lexington Books, 1979, supported by UNEP and the Canadian International Development Agency (CIDA).
55. Banking on the Biosphere?, by Robert E. Stein and Brian Johnson, Lexington Books, 1979, Chapter 1
56. The "Declaration of Environmental Policies and Procedures Relating to Economic Development" was signed at the headquarters of the UN in February 1980 by the Chief Executive Officers of the following institutions: UNDP, UNEP, the World Bank, the Organization of American States, the Asian Development Bank, the Inter-American Development Bank, the Commission of European Communities and the Arab Bank for Economic Development in Africa. These were soon joined by the African Development Bank and the European Investment Bank and later by the International Fund for Agricultural Development, the Nordic Investment Bank, and the Central American Bank for Economic Integration.
57. Document A/44/332.
58. Report of the Committee for Programme and Coordination, document A/44/16 of 15 June 1989, paragraphs 327 - 329.

59. "Comprehensive Policy Review of Operational Activities of the United Nations System", document A/44/324 of 29 June 1989, paragraphs 3 and 19.

60. See especially The World Bank and the Environment, First Annual Report, Fiscal 1990. World Bank President Barber Conable declared at a Tokyo Conference in September 1989 that the Bank is "irrevocably committed" to bring economic development and environmental protection into "creative harmony." UNDP's Administrator's 1989 report to his Governing Council spelled out a similar commitment towards which some \$300 million worth of projects were underway in 1988; today there are more than \$500 million worth in projects targeted at environmental objectives.

61. United Nations Development Program, Human Development Report 1990, New York, NY: United Nations, 1990.

62. "Our Common Future" page 316.

63. Ibid, pages 317-318.

64. Document UNEP/GC.15/8/Add.3 of 30 January 1989

65. The World Bank and the Environment, First Annual Report, Fiscal Year 1990.

66. Stockholm Declaration on the Human Environment, 7th preamble paragraph

67. For an illuminating review of this, as well as all aspects of the "UN system", see The Specialized Agencies and the United Nations: The System in Crisis by Douglas Williams, St. Martin's Press, 1987.

68. Preamble to the UN Charter

69. Universal Declaration of Human Rights, Yearbook of the United Nations 1948-49.

70. Our Common Future, page 333.

71. As examples of the treaties alluded to see the Ramsar Convention on Wetlands of International Importance of 1971, the Paris Convention for the Protection of World Cultural and Natural Heritage of 1972, the London Convention for the Prevention of Pollution from Ships of 1973, and the Vienna Conventions on Assistance in the Case of Nuclear Accident or Radiological Emergency, and on Early Notification of a Nuclear Accident and on Exchange of Information relating to Nuclear Facilities, both of 1986.

72. The Barcelona Convention and two associated protocols were signed on 2 February 1976 and entered into force on 2 December 1978.

73. Similarly, work on UNCED "cross-cutting" issues such as technology transfer under Prepcom authority may support and speed negotiations of conventions such as those on a possible framework convention on climate now underway in a parallel Intergovernmental Negotiating Committee set up by the UN General Assembly.
74. For early descriptions and evaluation see "Mediterranean Action Plan: An Interim Evaluation" by Baruch Boxer in Science, 10 November 1978, author's "The Mediterranean Action Plan" in Ambio, 1977, and "The Legal Regime of the Protection of the Mediterranean Against Pollution from Land-Based Sources" by Sachiko Kuwabara, Tycooly International Publishing Ltd, 1984.
75. See "Serving Future Generations" by author in The Future of the International Law of the Environment, published for The Hague Academy of International Law and the UN University by Marinus Nijhoff Publishers, 1985.
76. A possible exception arose during U.N. General Assembly consideration of the "Draft Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space" in December 1963. The representatives of the United States and Soviet Union stated that if this text were adopted without dissent, their governments would consider that the principles in the operative part of the declaration "reflected international law as accepted by the members of the United Nations" and, accordingly, would abide by them. They were joined in this provision by others, notably the United Kingdom and Canada. The declaration was adopted unanimously by the General Assembly on 13 December 1963.
77. The Nairobi Declaration was adopted on 18 May 1982 by 105 governments represented at the UNEP Governing Council of Special Character — ten years after the Stockholm Conference.
78. For a summary of their work, see Annex 1 of the WCED Report, Our Common Future, Oxford University Press, 1987.
79. For the full text of material summarized here see "Environmental Protection and Sustainable Development - Legal Principles and Recommendations" adopted by the Experts Group on Environmental Law of the World Commission on Environment and Development, R. D. Munro, Chairman, J. G. Lammers, Rapporteur, June 1986, published by Graham & Trotman/-Martinus Nijhoff in 1987, ISBN 0-86010-910-0. Material in this paper is drawn extensively from the foreword to this report by the then President of the International Court of Justice, Nagendra Singh.
80. GA Res 45/212, 21 December 1990
81. Signed by Ernst Gunther Broder and Barber B. Conable, Presidents of the European Investment Bank and the World Bank, in the Forward to "The Environmental Program for the

Mediterranean: Preserving a Shared Heritage and Managing a Common Resource", published by these two institutions in 1990.

82. Report of the Administrative Committee on Coordination, UNEP/GC.15/8/Add 2, 20 October 1988, paras 26 - 32.

83. At the international level, such extra costs are generally absorbed by the international organizations who provide assistance, whether it is in the form of grants or concessional or officially-backed commercial loans.

84. The Declaration of Brasilia, adopted by the Sixth Ministerial Meeting on the Environment in Latin America and the Caribbean, Brasilia, March, 1989.

85. Statement adopted at the Conference on the Changing Atmosphere: Implications for Global Security, Toronto, June 27-30, 1988

86. Paragraph 13 of the Noordwijk Declaration adopted 7 November 1989.

87. From the Benjamin Franklin Lecture by Prime Minister Brundtland, Washington, D.C., 2 May 1989.

88. Among the options for financial mechanisms presented to the Working Group of Experts of the Parties to the Montreal Protocol were four by UNEP's Executive Director:

- * an international Trust Fund, to which donor countries would pledge contributions. Offering the most straightforward institutional mechanism, it would be supported by a financial and technical secretariat.
- * an International Environment Facility, designed to identify and match available bilateral and multilateral funding with individual projects in developing countries using "soft" CFCs and other substitutes. A sort of clearinghouse mechanism.
- * a specially instituted financial organization which would act as an investment intermediary engaged in capital accumulation and risk spreading so as to arrange access by developing countries to environmentally sound technology and investment in sustainable development.
- * an independent financial corporation whose shareholders would comprise of contributions from all potential clients and donors. Equity would be directed to assist developing countries in meeting compliance costs through direct grants or reducing interest rates of long-term commercial loans.

89. Press Release issued at completion of the November 27-28 Global Environment Facility Meeting in Paris.

90. IPCC First Assessment Report, Volume I: Overview, section 3, Response Strategies

91. These figures are drawn from the article "Strategies for Sustainable Economic Development" by Jim MacNeill in the September 1989 issue of Scientific American. His figures include average annual amounts (in billions of dollars) of 19.3 for soil conservation, 5.3 for reforestation, 27 for population control measures, 30 for enhancing energy efficiency, 15.6 for renewable forms of energy, plus 27.3 for reducing third world indebtedness. The assumptions for these figures are given in the reference and should be reviewed; they are useful as an indication of magnitude rather than precise estimates.

92. Natural Endowments: Financing Resource Conservation for Development, WRI, 1990.

93. See, for example, The Greenhouse Effect: Negotiating Targets, by Michael Grubb, published by the Royal Institute of International Affairs, London, 1989.

94. The 1972 "Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter" was negotiated in the Intergovernmental Working Group on Marine Pollution set up by the Prepcom.

95. Recommendation 92 of the Stockholm Action Plan endorsed 23 principles set forth in an annex to the Conference Report.

96. UN document A/44/461 of 18 September 1989.

97. GA Resolution 2850 (XXVI) 20 December 1971.

ENVIRONMENTAL LAW
GUIDELINES AND PRINCIPLES

1

Stockholm Declaration

The United Nations Conference on the Human Environment.

Having met at Stockholm from 5 to 16 June 1972.

Having considered the need for a common outlook and for common principles to inspire and guide the peoples of the world in the preservation and enhancement of the human environment.

1

Proclaims that:

1. Man is both creature and moulder of his environment, which gives him physical sustenance and affords him the opportunity for intellectual, moral, social and spiritual growth. In the long and tortuous evolution of the human race on this planet a stage has been reached when, through the rapid acceleration of science and technology, man has acquired the power to transform his environment in countless ways and on an unprecedented scale. Both aspects of man's environment, the natural and the man-made, are essential to his well-being and to the enjoyment of basic human rights - even the right to life itself.

2. The protection and improvement of the human environment is a major issue which affects the well-being of peoples and economic development throughout the world; it is the urgent desire of the peoples of the whole world and the duty of all Governments.

3. Man has constantly to sum up experience and go on discovering, inventing, creating and advancing. In our time man's capability to transform his surroundings, if used wisely, can bring to all peoples the benefits of development and the opportunity to enhance the quality of life. Wrongly or heedlessly applied, the same power can do incalculable harm to human beings and the human environment. We see around us growing evidence of man-made harm in many regions of the earth: dangerous levels of pollution in water, air, earth and living beings; major and undesirable disturbances to the ecological balance of the biosphere; destruction and depletion of irreplaceable resources; and gross deficiencies, harmful to the physical, mental and social health of man, in the man-made environment, particularly in the living and working environment.

4. In the developing countries most of the environmental problems are caused by under-development. Millions continue to live far below the minimum levels required for a decent human existence, deprived of adequate food and clothing, shelter and education, health and sanitation. Therefore, the developing countries must direct their efforts to development, bearing in mind their priorities and the need to safeguard and improve the environment. For the same purpose, the industrialized countries should make efforts to reduce the gap between themselves and the developing countries. In the industrialized countries, environmental problems are generally related to industrialization and technological development.

5. The natural growth of population continuously presents problems for the preservation of the environment, and adequate policies and measures should be adopted, as appropriate, to face these problems. Of all things in the world, people are the most precious. It is the people that propel social progress.

create social wealth, develop science and technology and, through their hard work, continuously transform the human environment. Along with social progress and the advance of production, science and technology, the capability of man to improve the environment increases with each passing day.

6. A point has been reached in history when we must shape our actions throughout the world with a more prudent care for their environmental consequences. Through ignorance or indifference we can do massive and irreversible harm to the earthly environment on which our life and well-being depend. Conversely, through fuller knowledge and wiser action, we can achieve for ourselves and our posterity a better life in an environment more in keeping with human needs and hopes. There are broad vistas for the enhancement of environmental quality and the creation of good life. What is needed is an enthusiastic but calm state of mind and intense but orderly work. For the purpose of attaining freedom in the world of nature, man must use knowledge to build, in collaboration with nature, a better environment. To defend and improve the human environment for present and future generations has become an imperative goal for mankind - a goal to be pursued together with, and in harmony with, the established and fundamental goals of peace and of world-wide economic and social development.

7. To achieve this environmental goal will demand the acceptance of responsibility by citizens and communities and by enterprises and institutions at every level, all sharing equitably in common efforts. Individuals in all walks of life as well as organizations in many fields, by their values and the sum of their actions, will shape the world environment of the future. Local and national governments will bear the greatest burden for large-scale environmental policy and action within their jurisdictions. International co-operation is also needed in order to raise resources to support the developing countries in carrying out their responsibilities in this field. A growing class of environmental problems, because they are regional or global in extent or because they affect the common international realm, will require extensive co-operation among nations and action by international organizations in the common interest. The Conference calls upon Governments and peoples to exert common efforts for the preservation and improvement of the human environment, for the benefit of all the people and for their posterity.

II

PRINCIPLES

States the common conviction that:

Principle 1

Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations. In this respect, policies promoting or perpetuating apartheid, racial segregation, discrimination, colonial and other forms of oppression and foreign domination stand condemned and must be eliminated.

Principle 2

The natural resources of the earth, including the air, water, land, flora and fauna and especially representative samples of natural ecosystems, must be safeguarded for the benefit of present and future generations through careful planning or management, as appropriate.

Principle 3

The capacity of the earth to produce vital renewable resources must be maintained and, wherever practicable, restored or improved.

Principle 4

Man has a special responsibility to safeguard and wisely manage the heritage of wildlife and its habitat, which are now gravely imperilled by a combination of adverse factors. Nature conservation, including wildlife, must therefore receive importance in planning for economic development.

Principle 5

The non-renewable resources of the earth must be employed in such a way as to guard against the danger of their future exhaustion and to ensure that benefits from such employment are shared by all mankind.

Principle 6

The discharge of toxic substances or of other substances and the release of heat, in such quantities or concentrations as to exceed the capacity of the environment to render them harmless, must be halted in order to ensure that serious or irreversible damage is not inflicted upon ecosystems. The just struggle of the peoples of all countries against pollution should be supported

Principle 7

States shall take all possible steps to prevent pollution of the seas by substances that are liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea.

Principle 8

Economic and social development is essential for ensuring a favourable living and working environment for man and for creating conditions on earth that are necessary for the improvement of the quality of life.

Principle 9

Environmental deficiencies generated by the conditions of under-development and natural disasters pose grave problems and can best be remedied by accelerated development through the transfer of substantial quantities of financial and technological assistance as a supplement to the domestic effort of the developing countries and such timely assistance as may be required.

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Principle 10

For the developing countries, stability of prices and adequate earnings for primary commodities and raw materials are essential to environmental management since economic factors as well as ecological processes must be taken into account.

Principle 11

The environmental policies of all States should enhance and not adversely affect the present or future development potential of developing countries, nor should they hamper the attainment of better living conditions for all, and appropriate steps should be taken by States and international organizations with a view to reaching agreement on meeting the possible national and international economic consequences resulting from the application of environmental measures.

Principle 12

Resources should be made available to preserve and improve the environment, taking into account the circumstances and particular requirements of developing countries and any costs which may emanate from their incorporating environmental safeguards into their development planning and the need for making available to them, upon their request, additional international technical and financial assistance for this purpose.

Principle 13

In order to achieve a more rational management of resources and thus to improve the environment, States should adopt an integrated and co-ordinated approach to their development planning so as to ensure that development is compatible with the need to protect and improve environment for the benefit of their population.

Principle 14

Rational planning constitutes an essential tool for reconciling any conflict between the needs of development and the need to protect and improve the environment.

Principle 15

Planning must be applied to human settlements and urbanization with a view to avoiding adverse effects on the environment and obtaining maximum social, economic and environmental benefits for all. In this respect, projects which are designed for colonialist and racist domination must be abandoned.

Principle 16

Demographic policies which are without prejudice to basic human rights and which are deemed appropriate by Governments concerned should be applied in those regions where the rate of population growth or excessive population concentrations are likely to have adverse effects on the environment of the human environment and impede development.

Principle 17

Appropriate national institutions must be entrusted with the task of planning, managing or controlling the environmental resources of States with a view to enhancing environmental quality.

Principle 18

Science and technology, as part of their contribution to economic and social development, must be applied to the identification, avoidance and control of environmental risks and the solution of environmental problems and for the common good of mankind.

Principle 19

Education in environmental matters, for the younger generation as well as adults, giving due consideration to the underprivileged, is essential in order to broaden the basis for an enlightened opinion and responsible conduct by individuals, enterprises and communities in protecting and improving the environment in its full human dimension. It is also essential that mass media of communications avoid contributing to the deterioration of the environment, but, on the contrary, disseminate information of an educational nature on the need to protect and improve the environment in order to enable man to develop in every respect.

Principle 20

Scientific research and development in the context of environmental problems, both national and multi-national, must be promoted in all countries, especially the developing countries. In this connexion, the free flow of up-to-date scientific information and transfer of experience must be supported and assisted, to facilitate the solution of environmental problems; environmental technologies should be made available to developing countries on terms which would encourage their wide dissemination without constituting an economic burden on the developing countries.

Principle 21

States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

Principle 22

States shall co-operate to develop further the international law regarding liability and compensation for the victims of pollution and other environmental damage caused by activities within the jurisdiction or control of such States to areas beyond their jurisdiction.

Principle 23

Without prejudice to such criteria as maybe agreed upon by the international community, or to standards which will have to be determined nationally, it will be essential in all cases to consider the systems of values prevailing in each country, and the extent of the applicability of standards which are valid for the most advanced countries but which may be inappropriate and of unwarranted social cost for the developing countries.

Principle 24

International matters concerning the protection and improvement of the environment should be handled in a co-operative spirit by all countries, big and small, on an equal footing. Co-operation through multilateral or bilateral arrangements or other appropriate means is essential to effectively control, prevent, reduce and eliminate adverse environmental effects resulting from activities conducted in all spheres, in such a way that due account is taken of the sovereignty and interests of all States.

Principle 25

States shall ensure that international organizations play a co-ordinated, efficient and dynamic role for the protection and improvement of the environment.

Principle 26

Man and his environment must be spared the effects of nuclear weapons and all other means of mass destruction. States must strive to reach prompt agreement, in the relevant international organs, on the elimination and complete destruction of such weapons.

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NGO DECLARATION

We, who are Members of the Non-Governmental Organizations attending the United Nations Conference on the Human Environment at Stockholm, are honoured to address the Plenary Session of the Conference and to express to it the support and dedication of the bodies we represent. We have signed the statement which follows in our individual capacities. It does not necessarily reflect specific policies of the organizations whose representatives have signed it. But it does encompass their general areas of agreement.

We accept the principle that our planet's resources are limited, that its life support systems are vulnerable, that the combined effect to modern technology, consumption and population growth can place our whole planetary life at risk.

We accept the need for economic systems which do not exceed renewable resources and the carrying capacity of the environment. We accept social systems which are based upon the fair and equal sharing of material goods and of services and upon the pursuit of exponential growth where it alone is possible—in the goods of the mind and the spirit. We accept political systems which see the planet itself as a center of loyalty and renounce racial and political oppression, economic exploitation and the final environmental insult of war.

We believe that the Stockholm Conference marks the beginning of a new international consciousness of our planetary life. Man has thought of the planet as a place with unlimited resources to exploit, unlimited energies to manipulate, unlimited lands to develop and settle, and unlimited air and water to cleanse the world of the wastes produced by man. Now we realize that not one of these propositions is true. So great has been the technological thrust of our science and energy, so rapacious our consumption of non-renewable resources, so rapid our growth in numbers, so heavy the load we place on our life-supporting systems, that we began to perceive the finite qualities of the biosphere of soil, air and water which make up the environment of all living things in our planetary home.

This is a revolution in thought fully comparable to the Copernican revolution by which, four centuries ago, man was compelled to revise their whole sense of the earth's place in the cosmos. Today we are challenged to recognize as great a change in our concept of man's place in the biosphere. Our survival in a world that continues to be worth inhabiting depends upon translating this new perception into relevant principles and concrete action.

The following principles seem to us to flow from our new perception of the vulnerability of planet earth:

1. The main force of the master force of the modern world—science and its applications in technology—must be shifted to a new and sensitive appreciation of the delicate interdependencies between all forms of planetary existence and to scientifically sound management of the habitats and ecosystems upon which all life depends.

2. We must accept new economic perspectives. Developed economies which have tended increasingly to stress the highest production and consumption of material goods as the chief index of prosperity, must be redirected towards a more careful recycling of materials, use of energy and disposal of wastes and towards a

greater emphasis on non-material satisfactions—services, recreation, art, knowledge, civic amenity and, above all, altruism in the pursuit of the common good. At the same time the fundamental material needs of developing lands must take priority over high consumption standards in developed economies and among the elites in developing lands. Both in production and physical consumption, the world economy must come to be in balance with environmental carrying capacity. Exponential growth is possible only in the realm of mind and spirit. Equally, by means conforming to differing cultures, traditions and levels of population pressure, the world's peoples need to accept the aim of achieving levels of population which do not surpass the dependable productivity of natural resources.

3. Such a balance can be achieved only if we face honestly the problem of social justice and redistribution. Since endless economic growth for rapidly rising populations is not conceivable, resources which are basically limited have to be submitted to some principle of sharing and equality. In the planet at large, it is unacceptable that the third of the people who are technologically developed should continue to command three-quarters of the world's wealth. It is equally unacceptable within each society that a rich minority should enjoy a very large percentage of the society's material resources.

~~It is not political systems, incapable of interdependence in our shared biosphere has to be matched by a new dimension of planetary loyalty. Nations, races and cultures give the world its much-prized richness and diversity. But they can no longer be sources of aggression and destructive competition. We pledge ourselves to the support and improvement of the international institutions already established in the United Nations system. We look to further development of powerful and representative institutions to express our common political life at the regional and global levels. We reject all forms of racial oppression or political enslavement. Above all, we see in war the ultimate misuse of science, the baleful destroyer of all economic and social benefit and the final betrayal of our common humanity.~~

THE STOCKHOLM AGENDA: POLICY AND ACTION

1. Planning and Management of Human Settlements.

We wish to place special emphasis on the need for new research and action under the following headings:

a) General land use policies should secure the rational development and allocation of a scarce resource—the land itself—between a variety of different human needs—work, settlement and recreation—and preserve and maintain outstanding architectural monuments, archeological sites and areas of open space and natural beauty.

b) Urban and rural planning should secure public control of urban land uses and abolish the disparities between rural and urban settlements. It should create or restore true neighbourhoods and reduce or circumvent urban sprawl. It should also

bring the use of the automobile under control by devising orderly transport systems.

c) Policies should be introduced to reduce the human stress and physical deterioration which occur as a result of inadequate diets (particularly in infancy), the lack of decent housing, intolerable noise and the absence of any adequate assistance for responsible parenthood.

2. Environmental Aspects of Natural Resource Management

National land use planning should account responsibility for the regional and global impacts of national actions and should conform to the following principles and procedures:

a) Renewable natural resources must be subjected to ecologically sound sustained-yield management.

b) Rare or endangered animal and plant species, as well as unique natural sites and habitats, should be given complete protection.

c) The mining of fresh water, minerals and petroleum reserves must be regulated. The recycling of materials should become standard practice. Those who extract must be responsible for the restoration of mined and scarred landscapes to acceptable environmental standards.

d) Decisions on natural resource development should be preceded by examination of their environmental and social impacts. Where technical resources are not yet available for such evaluations, they should be developed as speedily as possible. The findings of such examinations should be made public prior to conclusive decision-making.

e) Nations should pool substantial funds and capabilities in research in a major international effort to develop clean and abundant energy sources as rapidly as possible.

f) Increased financial, technical and educational assistance should be made available to less developed nations to enable them to manage natural resources for sustained productivity.

3. Identification and Control of Pollutants of Broad International Character.

a) Governments must accept responsibility for any international pollution caused by the activities of their nations.

b) A United Nations world-wide Earth-watch to monitor the distribution, movement and disposal of pollutants will enable governments to regulate pollution and enforce compliance to the regulations. The United Nations must also accept responsibilities for enforcement.

c) Appropriate control and inducements must be introduced to secure industry's cooperation in the invention and introduction of non-pollutive technologies.

d) Since radioactive substances are the most dangerous and long-lasting pollutants, all testing of nuclear weapons should cease at once. The development of nuclear energy should proceed with the utmost caution and safeguards.

e) The use of biocides in war should be prohibited by international regulation.

f) The phasing out of such long-lasting pest control substances as the chlorinated hydrocarbons should be achieved with all possible speed on a worldwide basis. The process should be accompanied by intensive research into and production of effective and acceptable alternatives. Where their use is more expensive, developing lands should receive additional funds to cover the cost of abandoning cheaper but more damaging substances.

g) Since eroding soil is still mankind's most common pollutant, the greatest emphasis must be placed on sound practices of soil conservation. New efforts are also needed to return human and animal wastes to the soil.

h) Regional institutions should begin at once to supervise the health or the recovery of surface and underground water systems. Where such agencies exist, regular progress reports should be made available to governments and citizens.

4. Educational, Informational and Cultural Aspects of the Environment.

a) The United Nations should be responsible for a centralized exchange of environmental information. In planning such exchanges, account should be taken of existing collections and services and the advice of librarians and information specialists should be sought.

b) The United Nations should encourage the training and use of scientists in environmental sciences in all countries. It has a particular responsibility to assist their training and use in developing countries so that they can effectively participate in monitoring and managing the changing environment.

c) The essentially interdisciplinary, humanistic and ethical aspects of environmental education—the science of ecology, planetary loyalty, respect for life, care for others and a lack of all rapacity—should be stressed at every level of education and mass communication so that all people develop a primary love for their fellow human beings and for their native planet.

5. Environment and Development

a) We recognize that many of the worst environmental problems of the world—in particular the most dangerous impacts of disease and premature mortality—have their roots in destruction.

b) We affirm the over-riding necessity of moving at once to a significant redistribution of the world's resources in favour of the developing countries. The 0.7 per cent of GNP in grants and low-interest, long-term loans for emergency assistance proposed in the Pearson Report should be seen as the beginning of a planetary tax system.

c) Environmental regulations introduced in developed lands should be so designed as to place no unjustifiable barriers to the exports of developing countries.

d) Extra costs incurred by developing lands in order to protect or enhance environmental quality should be covered by additional flows of capital assistance from the developed states. The introduction of non-polluting technology is one aspect of a wider effort to see that developing nations avoid the environmental mistakes made by the already developed states. This need is particularly clear in the siting and planning of human settlements.

6. International Organizational Implications of Action Proposals.

a) We affirm our support for the proposal of a separate United Nations Secretariat for the Human Environment under an intergovernmental governing council.

b) We support the proposal for a special fund for the environment but regard the provision of \$100 million over five years as quite inadequate in relation to the magnitude and complexity of the task.

c) We request close cooperation between the Secretariat and the Non-Governmental Organizations, between citizen bodies and commercial and industrial interests concerned with quality of the environment. In order to secure a better balance of world representation, we request finances and other facilities for developing nations to enable them to take a more effective part in the proposed United Nations Secretariat for the Human Environment. The means of providing this support should be discussed by the Non-Governmental Organizations.

THE ROLE OF THE NGO

(ngo declaration cont'd)

a) We reaffirm the concept of organized citizen support for the work of the United Nations and believe that the Stockholm conference and the ongoing work of the United Nations in the area of the environment can encourage all those who have long worked in this field and draw on the enthusiasm of new recruits. We therefore intend to urge our organizations to mobilize and expand their membership in support of the work of the United Nations in general and the Environmental Secretariat in particular.

b) In consultation with the existing conference Secretariat, we will seek the most appropriate ways in which our separate bodies can mobilize citizen support for the Stockholm decisions during the months between the Stockholm conference and this year's General Assembly. Thereafter we wish to establish permanent forms of liaison with the Secretariat, with each other and other interested bodies.

c) We will consult with each other to work out the most appropriate means of strengthening our various efforts, mobilizing joint pressure for environmental change and avoiding, where possible, overlapping activities. We will also seek to secure the support of various organizations for special fund-raising for specific environmental programs.

d) At the national level, all environmental organizations should seek to participate in governmental decisions affecting the environment and insist on advance information concerning projects of environmental impact.

As a particular year for reassessment, say, "The Planet in 1980," should be made the focus for official non-governmental and citizen programs and action in understanding and protecting the planetary environment.

We pledge ourselves, in our work, our loyalties, our contacts and our own styles of life, to try to live as citizens of a loved yet endangered planet and to share our common heritage with respect for all living things and in justice and amity with the people of planet Earth.

Life Is One And The World Is One

Prime Minister Indira Gandhi Speaks to Plenary

Extracts from the speech

One cannot be truly human and civilized unless one looks upon not only fellow-man but all creation with the eyes of a friend....

It is sad that in country after country, progress should become synonymous with an assault on nature. We who are a part of nature and dependent on her for every need, speak constantly about "exploiting" nature.... I remember Edward Thompson, a British writer and a good friend of India, once telling Mr. Gandhi that wild life was fast disappearing. Remarkd the Mahatma—"It is decreasing in the jungles but it is increasing in the towns!"

As we struggle to create a better life for our people, we cannot indulge in... practices (of exploiting the labor of the masses) even for a worthwhile purpose. We are bound by our own ideals. We owe allegiance to the principles of the rights of workers and the norms enshrined in the charters of international organizations. Above all, we are answerable to the millions of politically awakened citizens in our countries. All these make progress costlier and more complicated.

On the one hand the rich look askance at our continuing poverty—on the other they warn us against their own methods. We do not wish to impoverish the environment any further and yet we cannot for a moment forget the grim poverty of large numbers of people. Are not poverty and need the greatest polluters? For instance, unless we are in a position to provide employment and purchasing power for the daily necessities of the tribal people and those who live in or around our jungles, we cannot prevent them from combing the forest for food and livelihood: from poaching and from despoiling the vegetation. When they themselves feel deprived, how can we urge the preservation of animals? How can we speak to those who live in villages and in shums about keeping the oceans, the rivers and the air clean when their own lives are contaminated at

the source? The environment cannot be improved in conditions of poverty. Nor can poverty be eradicated without the use of science and technology.

Must there be conflict between technology and a truly better world or between enlightenment of the spirit and a higher standard of living?...

I am reminded of an incident in one of our tribal areas. The vociferous demand of elder tribal chiefs that their customs should be left undisturbed found support from noted anthropologists. In its anxiety that the majority should not submerge the many ethnic, racial and cultural groups in our country, the Government of India largely accepted this advice. I was amongst those who entirely approved. However, a visit to a remote part of our northeast frontier brought me in touch with a different point of view—the protest of the younger elements that while the rest of India was on the way to modernization they were being preserved as museum pieces. Could we not say the same to the affluent nations?...

We should re-order our priorities and move away from the... model which seems to have given a higher place to things rather than to persons and which has increased our wants rather than our enjoyment. We should have a more comprehensive approach to life, centered on man not as a statistic but an individual with many sides to his personality. The solution of these problems cannot be isolated phenomena of marginal importance, but must be an integral part of the unfolding of the very process of development.

The extreme forms in which questions of population or environmental pollution are posed, obscure the total view of political, economic and social situations. The Government of India... believe(s) that planned families will make for a healthier and more conscious population. But we know also that no program of population control can be effective without education and without a visible rise in the standard of living....

It is an oversimplification to blame all the world's problems on increasing population. Countries with but a small fraction of the world population consume the bulk of the world's production of minerals, fossil fuels, and so on....

The inherent conflict is not between conservation and development but between environment and the reckless exploitation of man and earth in the name of efficiency....

Cause of the Crisis

All the "isms" of the modern age—even those which in theory disown the private profit principle—assume that man's cardinal interest is acquisition. The profit motive, individual or collective, seems to overshadow all else. This overriding concern with Self and Today is the basic cause of the ecological crisis.

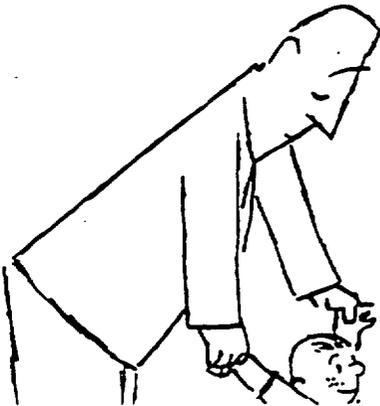
It is clear that the environmental crisis which is confronting the world, will profoundly alter the future destiny of our planet. No one among us, whatever our status, strength or circumstance, can remain unaffected. The process of change challenges present international policies. Will the growing awareness of "one earth" and "one environment" guide us to the concept of "one humanity"? Will there be a more equitable sharing of environmental costs and greater international interest in the accelerated progress of the less developed world? Or, will it remain confined to a narrow concern, based on exclusive self-sufficiency?

Life is One

Life is one and the world is one, and all these questions are inter-linked. The population explosion, poverty, ignorance and disease, the pollution of our surroundings, the stockpiling of nuclear weapons and biological and chemical agents of destruction are all parts of a vicious circle. Each is important and urgent but dealing with them one by one would be wasted effort....

We must re-evaluate the fundamentals on which our respective civic societies are based and the ideals by which they are sustained. If there is to be a change of heart, it is not an organization or a country—no matter how well intentioned—which can achieve it. While each country must deal with that aspect of the problem which is most relevant to it, it is obvious that all countries must unite in an overall endeavour. There is no alternative to a cooperative approach on global scale to the entire spectrum of our problems.

It has been my experience that people who are at cross purposes with nature are cynical about mankind and ill-at-ease with themselves. Modern man must re-establish an unbroken link with nature and with life. He must again learn to invoke the energy of growing things to recognize, as



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