

UNEP/UNITAR/UNCHS (Habitat)

TRAINING PROGRAMME IN

ENVIRONMENTAL LAW AND POLICY



UNITAR



UNEP



UNCHS
(Habitat)

Nairobi

29 November - 17 December 1993

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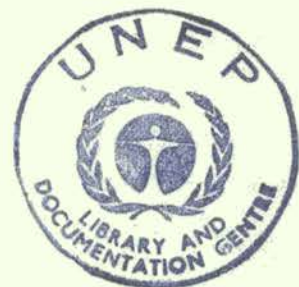


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ANNEX I

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MESSAGE FROM THE EXECUTIVE DIRECTOR

UNCED has confirmed UNEP's major pre-occupation with the enormous challenge set for international law in the context of sustainable development. The translation of sustainable development policies and international conventions into action through appropriate country-specific legislative and institutional measures, constitutes a major focus of UNEP's programme in the field of Environmental Law and Institutions.

To facilitate the realization of UNCED objectives, the Environmental Law and Institutions Programme Activity Centre of UNEP has launched several initiatives for capacity building in the legal and institutional field. Among these is its biennial Global Training Programme in Environmental Law and Policy, organized and conducted in collaboration with the United Nations Institute of Training and Research (UNITAR) and the United Nations Centre on Human Settlements (Habitat). The first Training Programme was held at UNEP Headquarters in Nairobi, from 29 November to 17 December 1993.

The overwhelming response from governments seeking participation - some 175 applications from 99 developing countries and countries with economies in transition - amply demonstrates the need felt by these countries for capacity building in the area of environmental law and policy.

The Programme covered a wide range of subjects, including a detailed examination of major global and regional environmental conventions, an analytical survey of national legislative and institutional regimes adopted by various countries for environmental management for sustainable development, and an overview of new developments in environmental law and institutions. Most of the participants were senior government officials, including legal officers, who would be expected to contribute to national efforts aimed at strengthening legal and institutional regimes for environmental management for sustainable development.

The results of this Programme have been encouraging. They represent only the beginning of UNEP's role in capacity building in the field of Environmental Law. It is hoped that the momentum of this effort will continue and lay the foundation for better addressing countries' needs and ability-especially developing countries and those with economies in transition-to-evaluate and address the crucial questions related to policy choices, modes of implementation of development options, and the use of environmental law as an instrument for translating sustainable development policies into action.

On behalf of the co-organizers I thank FAO, UNCTAD, GATT, the World Bank, IUCN, ICRAF and the Secretariats of Environmental Conventions for their cooperation and support.

We look forward to building upon this collaboration in the future with a view to enhancing the effectiveness of our combined efforts towards much needed capacity building at national level and achieve a really integrated and cohesive approach to sustainable development.

Elizabeth Dowdeswell
Under-Secretary-General
and
Executive Director of UNEP

FOREWORD

The United Nations Environment Programme (UNEP), in collaboration with the United Nations Institute of Training and Research (UNITAR), and the United Nations Centre for Human Settlements (Habitat), conducted a Global Training Programme in Environmental Law and Policy at UNEP Headquarters in Nairobi, Kenya from 29 November - 17 December 1993. The programme, the first of its kind, was in some ways experimental. It was a good example of the kind of cooperation envisaged by Agenda 21 between organizations within the UN system and other international bodies, to strengthen joint activities in order to address environmental and development issues, and to promote coherence and consistency of action.

Altogether, participants from 23 countries, from Africa, the Middle East, Latin America and the Caribbean, Asia and the Pacific, took part in the Programme. The Permanent Representatives to UNEP of Venezuela and Colombia, as well as observers from the Comoros, Kenya and Zimbabwe, attended the training sessions. The full list of participants is at Annex I.

The objective of the Training Programme was to inform participants of legal and institutional developments at international and national levels in the field of environmental law; to inspire a greater interest in and commitment towards the use of environmental law as an instrument for translating sustainable development policies into action; and to enable the participants to take initiatives for the development and implementation of environmental law in their respective home countries, on a more informed basis.

The prescription for success of a training programme include proper advance preparation of participants, relevance and focus of the curriculum to the participants' work in their home countries, application of methodologies which stimulate inquiry and secure vibrant interaction between participants and resources persons, as well as, amongst the participants, and, very importantly, follow-up action. Several innovative measures such as, special assignments for participants, further training through attachment for outstanding participants, were introduced to achieve these objectives. Every effort was also made to weave this programme into the longer term programmes of UNEP as well as of UN and other agencies, in the area of endogenous capacity building for sustainable development, in the context of Agenda 21.

The programme received every possible encouragement and support from UNEP's partners, UNITAR and UNCHS (Habitat), and equally from a number of UN and other agencies, e.g. FAO, UNCTAD, GATT, The World Bank, IUCN, ICRAF, and Convention Secretariats, which contributed in a variety of ways in the development and conduct of the programme. Several PACs and Units within UNEP such as OCA/PAC, IE/PAC, TEU, Climate Change and Biodiversity Units, Environmental Economics Unit, EETU, and Regional Offices gave of their best towards the Programme. In particular, our Regional Offices provided significant support by obtaining appropriate and timely nominations. The success in selecting 25 participants from nearly 200 applications received in a brief span of time of some 6-8 weeks was, to a large measure, due to their efforts. The team work in ELI/PAC was exemplary.

This report of the first Global Training Programme includes summaries of the 3 main teaching modules which comprised the three-week course. The first module covered international environment conventions. The second module dealt with national legislation and institutions. The final module canvassed new developments in environment law. The report also includes the lecture outlines presented by the resource persons. As well, exercises on various topics within each of the modules have been assembled. It is hoped that this report will be a modest but useful contribution to training institutions and policy makers working in the area of law and policy for environmental management for sustainable development.

A separate Training Kit based on the Global Training Programme and incorporating the bulk of the materials distributed during the workshop is under preparation. When completed, the Kit will be a valuable complement to this report, and together they will comprise UNEP's contribution to capacity-building in the field of environmental law, policy and institutions.

Sun Lin
Director
Environmental Law and Institutions
Programme Activity Centre

INTRODUCTION

Scope

The Training Programme was conceived and developed so as to constitute the legal and institutional component of endogenous capacity building for improved environmental management for sustainable development. It was designed specifically to respond to the needs of developing countries.

To this end, the Training Programme aimed at informing and training participants in the development of environmental law and institutions at international and national levels, developing requisite skills in this field and inspiring a greater interest in and commitment towards the use of environmental law as an instrument for translating sustainable development policies into action. The Training Programme should strengthen participants' capacities in taking initiatives, on a more informed basis, in their respective home countries for the development and implementation of environmental law.

Opening

Ms. Elizabeth Dowdeswell, Under-Secretary-General and Executive Director of UNEP opened the Training Programme. In her opening remarks, Ms. Dowdeswell underscored the importance of capacity building for the attainment of sustainable development goals in the Post-Rio period and the high priority being accorded to it in UNEP's new programme. Taking into account developments in the field of international environmental law and the related emergence of a series of environment conventions, Ms. Dowdeswell underlined the importance of implementation of those conventions at national level. She remarked that genuine capacity building required a holistic approach which integrated several components, including those that were the focus of the Global Training Programme. She welcomed the initiative to support and facilitate this process by developing a training programme focussing on legal and institutional developments at the international, and in particular the national levels.

The Under-Secretary-General emphasized the linkages between the various conventions and the necessity to carefully analyze the obligations that this would entail for signatory countries. She commended the inclusion of a wide range of subjects vital to environmental management for sustainable development and the sustained focus on national measures in the training programme, which she felt could make a significant contribution to capacity building. This effort would be a crucial element to achieving sustainable development goals. Ms. Dowdeswell applauded the joint and collaborative effort between UNEP, HABITAT, and UNITAR as well as the contributions of the convention secretariats and other UN agencies. Without these co-operative endeavours, the Global Training Programme would not have been possible. In conclusion, the Executive Director wished the participants success in the Training Programme.

STRUCTURE AND CONTENT

The Training Programme covered an introduction to environmental law, and a detailed examination of major global and regional environmental conventions. The review of conventions included Climate Change, Biological Diversity, the Ozone and Basel Conventions as well as CMS and CITES. The programme also included: an analytical survey of national legislative and institutional regimes adopted by various countries for environmental management for sustainable development, an overview of new developments in environmental law and institutions, and such subjects as environment and trade, liability and restitution, environment problems of human settlements and land use, and transfer of technology.

A course outline, exercises and a bibliography of selected training material were compiled for each topic within the different training modules. Experts from UNEP, UNCHS, UNCTAD, the GATT, and FAO, representatives of environment Convention Secretariats, the World Bank, IUCN and several other institutions contributed to the preparation and conduct of the Training Programme.

METHODOLOGY

The Training Programme was designed to ensure that it was highly participatory in nature and that the participants formed an integral part of each of the training modules and lecture sessions. The general methodology applied included a review of international environment conventions and their implementation at national levels, highlighted linkages between national legislation and international environmental law, and was geared to catalyze appropriate action by the participants in their home countries.

At the conclusion of each lecture, there was interaction with the participants asking questions of the resource persons based on the presentation given. In the result, lively discussions often ensued. The participants also worked in small groups assisted by the resource persons. They had to make oral and written country presentations on specific topics of relevance to a particular part of the programme. In doing so, the participants had to appraise themselves fully of their respective countries environmental problems, priorities and policies; the existing legislative and institutional arrangements for environmental management, conservation of natural resources; the status of participation in environment conventions and their implementation, and proposals if possible, for future action in the legislative and institutional fields for environmental management for sustainable development. Country presentations included lectures on national water resources law, appreciation at national level of the Biodiversity Convention, the Regional Seas Programme and the Global Environment Facility.

As part of their advance preparation, candidates were required to complete a detailed questionnaire dealing with the above mentioned topics and other subjects on the Training Programme. Guidelines emphasizing concise and sharp focus in the preparation of country presentations, as well as exercises, were given in advance to the participants.

In those instances when the participants split into smaller working groups to discuss specific problems in detail and exercises, a group leader was required to present the findings of the working group, and to respond to issues raised by the approach taken by it to peculiar environmental law issues or problems under discussion.

PROVISION OF REFERENCE MATERIALS

In order to prepare and participate on a well-informed basis in all sessions of the Training Programme, participants received a voluminous set of background material for use then and afterwards in their home countries. This material included the two volumes of Multilateral Treaties in the Field of the Environment; texts of national environmental legislation in connection with the issues addressed during the Training Programme; relevant material from UNEP, Conventions secretariats, IUCN, and the World Bank.

SPECIAL ASSIGNMENTS

The participants were also required to have an outline of a specific assignment that could be of immediate relevance to their work in their respective countries which could be pursued during the period of training. The assignment was to have been identified and outlined by each participant in consultation with his/her government prior to their arrival for the Training Programme.

In regard to these special assignments, the role of the organizers of Training Programme was to provide all possible assistance to the participants to address the problem identified. It is envisaged that the assistance will not be a one-off affair, and will be ongoing. Consequently, it could include short-term attachments at UNEP or the legal divisions of other relevant UN bodies/agencies, Convention Secretariats, IUCN, the World Bank, etcetera, and/or the provision of required technical information, material or expertise from these organizations.

EVALUATION

A detailed questionnaire was distributed to each participant to obtain some feedback on the training, and to help evaluate the Training Programme.

An large number of respondents felt that the programme was equally relevant to the needs and conditions of their own country and region. An overwhelming number of participants also considered that the training course was relevant to the requirements of their work.

The general consensus from participants was that the training course had succeeded in its objective of information and training in the environmental, legal and institutional developments

at national and international levels. Participants were unanimous that the time they had spent in the course was well utilized. They considered that the course had contributed significantly to the development of requisite skills in environmental law. In turn, this had inspired a greater interest in, and commitment by them, to the overall value of environmental law and institutions towards the wider goal of sustainable development.

The schedule of the training course was well received and most participants felt that the time available for discussions was adequate. Feedback on the benefits of the participatory methodology as a teaching tool using country presentations was generally positive, with the majority being of the view that this was a beneficial method of sharing and imparting relevant information. There was broad agreement that a "hands on" approach to training contributed to making the training sessions more interesting.

The exercises on national legislation elicited favorable comments with the preponderance of opinion being that they were a useful component of the training course. A large volume of materials comprising all the multilateral environment conventions studied, as well as comments on them were circulated. National legislation, where available, was distributed. Assessment of the responses from the questionnaires indicated that most participants appreciated the value of the technical documentation provided. There was unanimity of opinion that the materials made available, although voluminous, would fill a gap in information in the participants' home country.

The responses from participants also indicated a need for re-assessing some parts of future training courses. One view for example, was that the working timetable should have been more realistic. It was felt that the programme was too ambitious in that it tried to cover a large number of new and complex topics in a relatively short space of time. Opinions were expressed that perhaps more case studies should have been discussed. Others felt that to maximize the benefit of being in Nairobi, more time for discussions among participants and with officials of UNEP should have been made available.

In as far as the duration of the training course went, the general view was that optimum length had been achieved. The majority of the participants considered that the number of lectures was ideal. The lecture presentations received favorable reviews as did the level of expertise shown by the lecturers.

That the training course succeeded in its objectives was evidenced by the participants' overall reaction to it. Almost all agreed that as a result of their participation in the programme, they would make better and more informed decisions in their respective areas of work. They felt that an equally tangible result of the course was that it had enhanced their understanding of the legislative, institutional and policy frameworks in environmental law. Almost all the participants considered the experience worthwhile and felt that the training programme should be held annually.

Some respondents felt that the programme could be improved by not limiting it to participants from developing countries (especially from the perspective of comparative studies). It was the hope of a number of those that participated that the Global Training Programme would lead to the development of regional programmes which would enable sharper focus to be given to the problems

and challenges faced by certain geographic areas.

RECOMMENDATIONS

PREPARATORY PROCESS

- A thorough knowledge of the course language, both written and spoken, is an essential prerequisite for selection and participation in the training programme. Candidates' language abilities can, to a certain extent, be ascertained by the requirement that the application forms be completed personally by each applicant in the course language. If necessary, proof of proficiency in the course language will be obtained by local UNDP offices conducting "screening tests."
- A nomination does not amount to a selection. An erroneous impression seems to have been created that nomination was synonymous with selection, which was not the case. When the invitations are sent out to individual countries, it is understood and will be clearly explained that because of the limited spaces available, a nominated candidate would not necessarily be chosen.
- Participants will be well briefed in writing, in advance, as to what is expected of them on arrival for the training programme. In particular, the country presentations and the special assignments require adequate preparation, and the guidelines for both will comprehensively stipulate what is required of each participant.

STRUCTURE AND CONTENT

Programme Schedule

Given the complexity and variety of topics, and the fact that many of them are being exposed to participants for the first time, the programme schedule will be less constricted. In view of the wide coverage of the schedule and the need to complete each module on time, organizers and resource persons will be required to strictly follow the given timeframes set out in the programme schedule.

Training Modules

While the broadest possible exposure to as many international environment conventions as possible is laudable, it is also desirable in order to make the examination of individual conventions more effective, to review their salient aspects in greater detail. It will also be helpful if a holistic approach to the treatment of the conventions is adopted. This could be achieved by dividing the conventions

into "thematic areas." In this way, for example, the CMS and CITES Conventions could be integrated with the sessions on the Convention on Biological Diversity, and treated as a unit.

Country Presentations

Arising from the observations from a number of participants that this aspect of the programme became repetitive and tedious, the country presentations will be reduced to one per participant. Each will be no longer than 10 to 15 minutes and hence it should be sharply focussed on the subject matter. The guidelines for the preparation of the country presentations will be sent out as early as possible with the objectives of the exercise clearly set out, and explanatory notes of how they are to be prepared. This aspect of the programme, while actively encouraging group interaction and participation, should not, in any one instance, exceed thirty minutes.

Individual Study Time

In view of the wealth of information that exists at UNEP on environmental law, policy and institutions, including all material in the library, participants should be afforded the opportunity to carry out individual research projects of particular value to their nominating countries. They should be informed in advance of this to enable them to come with a prepared conceptual framework of their research project. The organizers should also facilitate, where possible, meetings with appropriate UNEP contacts/resource persons, relevant to the project of the participants.

Debriefing

It would be useful if, at the end of each day, an assigned person were to conduct a 10- to 15-minute debriefing session, highlighting the main features of the day's presentation, reiterating the issues they spawned, and explaining the linkages between the particular exercises covered during that day and the overall module. To ensure that participants are prepared, they will be told at least a day in advance that they have been selected to lead the debriefing.

Audio-Visuals

Both participants and resource persons are encouraged to make greater use of audio-visual aids. These should not, however, replace well-prepared lectures.

Conference Facilities

The seminar room should be sufficiently spacious to enable the participants to be accommodated conveniently. They should not be changed.

Name and Place Tags

The organizers, on registration day, will hand out name tags for the individual participants to wear. Also, provision will be made for place tags to be positioned where each participant sits, indicating his first and last names. This would contribute to the participants getting to know each

other on an individual basis and assist the overall process of the training being a group and interactive one.

Date

The general view was that the training programme should be held earlier in the year (not close to Christmas as was the case in the first one).

GENERAL COMMENTS AND FOLLOW-UP

- The mixture of non-lawyers in the programme assisted the cross-fertilization of ideas and should be continued.
- In recognition of the role of NGOs in capacity building and environmental awareness campaigns, there should be a number of NGOs' participants or resource persons in the future.
- The basic content and emphasis of the programme was well received by the participants, and should not be altered. The training programme, while having a practical orientation, should retain a sufficiently academic aspect to enable participants to achieve an appropriate level of theoretical understanding of the dynamic processes which contribute to the evolution of international environment law.
- It became evident from the programme that quite a number of participants considered that the holding of regional training courses to cater for the problems and challenges unique to particular geographic areas or characteristics, should be conducted. A good example would be a programme designed to focus on the problem of small island States, whether from the Caribbean, Pacific or the Indian Oceans. These States would almost certainly have in common, environmental problems relating to global warming, rising sea levels, climate change, and pollution from marine-based sources.
- A training programme specifically designed to cater for countries with economies in transition should be mounted. It also seems clear that a global course which would cater for French-speaking countries should be established.

TRAVEL ARRANGEMENTS AND FINANCIAL SUPPORT

UNEP provided each participant with a return flight ticket from their country of residence to Nairobi. Accommodation as well as transport to and from the training venue was provided. Furthermore, participants received a stipend to cover food and miscellaneous expenses during the training.

WORKING LANGUAGE

The Training Programme was conducted in English.

CONCLUSION

The training programme succeeded in identifying some of the key players who, at the national level, would be expected to make significant contributions to the formulation of policy to environmental management regimes to achieve sustainable development goals. UNEP's role in this regard would be facilitative and should complement national and regional providing, through its intellectual strength, greater and more timely capacity building services. The value of the programme was that it enabled a wide variety of persons from a large number of countries, to come together and discuss common problems and posit solutions for future action. In the ultimate analysis, it is a truism that the goals of sustainable development can only be effectively accomplished by equipping local people at the national level with the management tools to achieve those goals. The success of the programme can also be gauged by the heightened level of awareness of the participants.

The global reach of the programme has also ensured that an international networking of key players has been established. The potential of this network for building upon and enhancing UNEP's role in capacity building exercises should be recognized and they should, in future, be used as the focal point for contact with national governments.

As a result of the training programme, the participants were sensitized to the importance of environmental law as a tool for effective environmental management. The training programme demonstrated the need to review, from time to time, the contents of the course to reflect the changing dynamics of international environmental law, both substantive and procedural. One topic that attracted some considerable support was negotiating international environment conventions. A number of oceanic States represented suggested that provision be made to address the protection of the marine environment and its interface with UNCLOS in future programmes. Other relevant topics might include: the law of sustainable development; management of coastal areas, legal and administrative mechanisms for the prevention and redress of pollution and other environmental damage.

Some of the participants in the training were not conversant with the most celebrated Conventions such as the Biodiversity Convention. This seems to indicate that at national level, a more effective mechanism for the distribution and dissemination of UNEP's literature should either be established or refined so as to ensure that those actually in the field of environmental law and policy, and who need to keep abreast of pertinent developments, receive relevant information, particularly covering environmental legislation, on a timely basis. The first participants of the global training programme should automatically be placed on the mailing list for distribution of selected UNEP and ELI/PAC publications.

The inaugural training programme also highlighted the need for continued training of appropriate personnel from the developing countries by the provision of grants and fellowships for further training and in-house attachments at UNEP. Ultimately, these efforts will lead to the further strengthening of relevant institutions, and hopefully improve the co-ordination within government departments and agencies.

Lal Kurukulasuriya
Chief
Environmental Law Training, Education
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Environmental Law and Institutions
Programme Activity Centre

MODULE 1
INTERNATIONAL ENVIRONMENT CONVENTIONS

(29 November - 6 December 1993)

- A. The United Nations Framework Convention on Climate Change
- B. The Convention on Biological Diversity
- C. The Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol
- D. The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.
- E. Chemicals in International Trade
- F. The Convention on International Trade in Endangered Species (CITES)
- G. The Convention on Migratory Species (CMS)
- H. International Management of Water Resources
- I. Transboundary Air Pollution

MODULE 1

The Global Training Programme was divided into three Modules, each of one week's duration. In the first week, Module 1 covered some of the major international environment instruments and conventions. These included the UN Framework Convention on Climate Change, the Biodiversity Convention, the Basel Convention and the Convention on Migratory Species. Module 1 sought to give participants an overview of the processes that led to the conclusion of these conventions, and analyzed in detail the salient features of each of the instruments forming part of the Module. This was achieved through a combination of lectures by the resource persons, working group exercises, discussions, and plenary question-and-answer sessions. Module 1 also canvassed the role of UNEP in the development and implementation of international environment law. There were presentations on the notion and structure of environment law as well. Lectures were also delivered during this session on the role of Habitat in addressing issues of environment management law as well as Habitat's Sustainable Cities Program.

A.1. UN FRAMEWORK CONVENTION ON CLIMATE CHANGE

Presented by:
Mr. S. Osafo
Legal Adviser

Secretariat of the Intergovernmental Negotiating Committee for a Framework Convention
on Climate Change (INC/FCCC)

Of all the environmental problems that transcend national boundaries, none has received more public attention in recent times than global warming. A decade ago, the focus of international attention was on ozone depletion, but since the early nineties, the excessive accumulation of greenhouse gases such as carbon dioxide and methane in the atmosphere as a result of human-induced activities has occupied the centre stage.

The initiative for an international response came from UNEP and WMO in 1988 through the establishment of the Intergovernmental Panel on Climate Change (IPCC). Following the release of the First Assessment Reports, the IPCC, and its acceptance by the Second World Climate in Geneva in November 1990, the forty-fourth session of the United Nations General Assembly established an Intergovernmental Negotiating Committee (INC) to prepare, as a matter of urgency, a framework convention on climate change. The INC held five sessions between February 1991 and May 1992, and within a period of fifteen months, succeeded in producing a convention which was opened for signature at the 1992 Rio Earth Summit.

The ultimate objective of the Convention is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened, and to enable economic development to proceed in a sustainable manner. The main principles recognized by Article 3 of the Convention are as follows: inter-generational equity, main responsibility, precautionary principle and right to sustainable development. As regards the commitments of the countries, there are common but differential responsibilities which take into account the differentiated position of countries and blocks, i.e (developed countries; small islands countries; countries with economies in transition; oil-producing countries and developing countries). Article 4.1 prescribes the commitments for all Parties; Article 4.2 concerns the commitments for developed countries Parties listed in Annex 1. The Convention recognizes the importance of providing the developing countries with financial resources to enable them to meet their commitments (Article 4.3, 4.4, and 4.5). According to those articles, developed countries shall provide new and additional financial resources to developing countries. They shall also provide such financial resources, including for the transfer of technology (Annex 11), needed by the developing countries Parties to meet the agreed full incremental costs of implementing measures that are covered by Article 4.1, and that are agreed between a developing country party and the international entity or entities referred to in Article 11. Special assistance shall be provided to countries with special circumstances (countries undergoing transition to market economy; developing countries listed in Article 4.8; least-developed countries and developing countries with economies that are vulnerable to the adverse effects of climate change, e.g. oil-producing countries).

The financial mechanism (Article 11) will function under the guidance of, and be accountable to, the Conference of the Parties, which will decide on policies, programme priorities and eligibility criteria (Article 11.1). The GEF is entrusted with the operation of the financial mechanism on an interim basis (Article 21.3). Other relevant provisions are those relating to research and systematic observation (Article 5); education, training and public awareness (Article 6). The institutions established by the Convention are the Conference of the Parties (Article 7), the Permanent Secretariat to be designated by the Conference of the Parties at its first session, and subsidiary bodies for scientific and technological advice (Article 9) and for implementation. The Convention shall enter into force on the ninetieth day after the date of deposit of the fiftieth instrument, acceptance, approval or accession (Article 23).

**A.1. PRESENTATION OUTLINE (PART 1):
UN FRAMEWORK CONVENTION ON CLIMATE CHANGE**

The Scientific Basis for the Framework
Convention on Climate Change

Presented by:
Mr. A. Alusa
Programme Officer
Climate Unit, UNEP

A.1.1. The climate system

- a) Atmosphere
- b) Ocean
- c) Land

A.1.2. The greenhouse effect, its origin and significance in climate change

- a) Natural greenhouse effect
- b) Enhanced greenhouse effect

A.1.3. History of studies and assessments for the impact of increased greenhouse gases in the atmosphere

- a) The Villach Conference
- b) The AGGG - Advisory Group on Greenhouse Gases
- c) The Intergovernmental Panel on Climate Change (IPCC)

A.1.4. Scientific facts about greenhouse gas increase

- a) CO₂
- b) Methane
- c) NO₂

A.1.5. Expected Global temperature increase

a) Scenarios

- i) Constant Emissions at 1990 level
- ii) Reduce all emissions by 50% in 1990 and hold constant thereafter
- iii) Decrease emissions at 2% per year from 1990
- iv) Increase emissions at 2% per year compound until 2010, then decrease by 2% per year.

- b) CO₂ - given the above scenarios
- c) Methane
- d) NO₂

A.1.6. Detection of climate change over natural variability

- a) The problem of detectability
- b) The limitation of climate models - GCMS

A.1.7 Impacts of climate change

- a) Sea Level
- b) Impacts on Agriculture
- c) Impacts on Terrestrial Ecosystems

A.1.8 What governments need to know

- a) Sources and Sinks of Greenhouse Gases
- b) Implications for the economy

**A.1. PRESENTATION OUTLINE (PART 2):
UN FRAMEWORK CONVENTION ON CLIMATE CHANGE**

Presented by:
Mr. S. Osafo
Legal Adviser

Secretariat of the Intergovernmental Negotiating Committee
for a Framework Convention on Climate Change (INC/FCCC)

A.1.1. Background

- a) Overview of the problem
- b) International
 - i) Formation of the Intergovernmental Panel on Climate Change (IPCC)
 - ii) Ministerial meetings and conferences
 - iii) UNEP/WMO initiatives
 - iv) Second World Climate Conference
 - v) United Nations General Assembly Resolution 45/212 of 21 December 1990.

A.1.2. An overview of negotiations leading to the adoption of Convention in May 1992 in New York and signature in Rio de Janeiro, June 1992.

A.1.3. Relevant provisions of convention

- a) Preamble
 - * Climate change is common concern of mankind (para. 1)
 - * Pertinent provisions of Stockholm declaration
 - * Special situation of small island States, developing countries and countries whose economies are heavily dependent on fossil fuel production.
- b) Principles (Art. 3)
 - * Inter-generational equity
 - * Main responsibility
 - * Common but differentiated responsibility
 - * Precautionary principle
 - * Right to sustainable development
- c) Commitments
 - i) Position of countries and blocks on the allocation of commitments.
 - * U.S.A.
 - * EEC and EFTA countries
 - * Oil-producing countries
 - * Small island States
 - * Developing countries

ii) Commitments for all parties (Art. 4.1)

- * Develop and periodically update and publish national inventories using comparable methodologies.
- * Formulate, implement, publish and regularly update programs containing measures to mitigate and adapt to climate change.
- * To operate in preparing for adaptation to the impacts of climate change.
- * Promote and co-operate in scientific, technological, technical, socio-economic and other research, etc.
- * Promote and co-operate in full and open exchange of relevant scientific, technological, technical, socio-economic and legal information related to climate change.
- * Communicate to the COP, information related to the implementation of the convention.

d) Commitments for developed country parties listed in Annex 1 (Art. 4.2)

- * Parties included in Annex I to adopt national policies and take corresponding measures on the mitigation of climate change, by limiting its anthropogenic emissions of greenhouse gases and protecting and enhancing its greenhouse gas sinks and reservoirs Art. 4.(2)(a).
- * Each of the parties included in Annex 1 shall communicate, within 6 months of the entry into force of the convention, for it and periodically thereafter, and in accordance with Art. 12, detailed information on its policies and measures referred to in para. 4 (2)(a).(Art. 4(2)(b)).
- * Conference of the Parties at its first session to review adequacy of Art. 4.2(a) and (b).(Art. 4(2)(d)).
- * Commitment by the parties included in Annex 11 to provide **NEW AND ADDITIONAL FINANCIAL RESOURCES** to meet the **AGREED FULL COSTS** incurred by developing countries in complying with their obligations under Art. 12.1 - communication of information.
- * They shall also provide such financial resources, including for the transfer of technology, needed by the developing country parties to meet the **AGREED FULL INCREMENTAL COSTS** of implementing measures that are covered by Art. 4.1 and that are agreed between a developing country party and the international entity or entities referred to in Art. 11.
- * Parties included in Annex II to assist developing country parties that are particularly vulnerable to the adverse effects of climate change in meeting the cost of adaptation to those adverse effects.
- * Annex II countries to promote the finance and transfer of technology to developing countries.

- * Assistance to countries with special circumstances.
 - i) Countries undergoing transition to a market economy.
 - ii) Developing countries listed in Art. 4.8.
 - iii) Least developed countries.
 - iv) Developing countries with economies that are vulnerable to the adverse effects of climate change e.g. oil-producing countries.
- f) Financial Mechanism (Arts. 11 and 21)
- * Financial mechanism to function under the GUIDANCE and be ACCOUNTABLE to the COP (Art. 11.1).
 - * COP to decide on POLICES, PROGRAMME PRIORITIES AND ELIGIBILITY CRITERIA (Art. 11.1).
 - * GEF entrusted with the operation of the financial entity on an interim basis - GEF to be restructured and its membership made universal (Art. 21.3).

A.1.4 Other relevant provisions

- * Research and systematic observation (Art. 5).
- * Education, training and public awareness (Art. 6).
- * Conference of the Parties - supreme body of the convention (Art. 7).
- * Secretariat - Permanent Secretariat to be designated by COP at its first session (Art. 8).
- * Subsidiary body for scientific and technological advice (Art. 9).
- * Subsidiary body for implementation (Art. 10).
- * Communication of information related to implementation (Art. 12).
- * Entry into force - status of ratification

A.1.5. Post adoption activities

- * Preparation towards first session of the Conference of the Parties.
- * Relationship of convention with the GEF.

A.2. EXERCISE: UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

PART 1

- A.2.1. A foreign investor plans to build a power station based on coal in your country. What advice could you give to the decision-makers in your Ministry of Energy according to the Climate Change Convention signed and/or ratified by your country?
- A.2.2. A citizen of your country takes the initiative to act before a national court against the construction of this power station. Is he entitled to do so? If yes, could the court make a legally binding judgement? If no, what advice could you give in your function as legal adviser to the Government or Parliament?
- A.2.3. Provided your Government agrees to the power station project, to what extent does it have to inform its citizens about the effects and consequences related to the use of such power?
- A.2.4. After your Government has agreed to the construction of the first power station, many other investors apply for authorizations to build more power stations. People argue that such activities will necessarily affect their environment and health. They request their Government to take measures for a well-balanced action plan taking into account the need for energy development and the protection of the environment with a view to sustainable development. How would such an environmental policy look? How could it be financed?
- A.2.5. In the context of these claims, what could NGOs contribute to policy-making?
- A.2.6. One of the causes of climate change is the abusive use of forestry resources. Many people are losing access to biomass resources as a result of the deforestation that is taking place to meet the demands for forest products in urban and commercial sectors. How would you advise your Government in order to draft or to implement an adequate forest and land tenure law? What kind of measures could your Government take in this field?
- A.2.7. Your country has not yet ratified the Climate Change Convention. What kind of action/procedural steps are required to do so? Could you advise the authorities on taking provisional measures for the implementation of the Convention? If yes, what kind of measures could be taken?
- A.2.8. Your country is already Party to the Convention. What action does or could it take to ensure the application of the Convention commitments?
- A.2.9. When another State Party of the Convention does not ensure compliance with it, what could your country do against this State within the Conference of the Parties?
- A.2.10. How would you advise your country to present its reports to the Secretariat of the Convention?

THE SCIENTIFIC BASIS FOR THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

Presented by:
Alexander L. Alusa
Programme Office
Climate Unit
UNEP

1. INTRODUCTION

I have been invited to provide a scientific background to the debate culminating in the agreement of the United Nations Framework Convention on Climate Change. This is no easy task because debate in negotiations went in a manner not particularly related to the scientific facts, but more related to economics, politics and diplomacy. Nonetheless, I know that the prompting for the Convention and the urging for it came out of the Second World Climate Conference and other scientific meetings before it. It was accepted that not all that needed to be known was known about the science of climate change. Indeed there were questions related to our very understanding of the climate system itself and its natural variability. The definitions of climate change as opposed to climate variability became particularly contentious. The framework Convention was agreed in spite of this uncertainty and on the basis of the precautionary principle.

In this presentation, I seek to highlight the scientific basis for the Framework Convention on Climate Change. I will, of necessity, concentrate only on the essential as time will not allow a detailed development of most of the ideas.

2. The Climate System

The climate system is controlled by the composition and dynamics of the atmosphere, oceans and the land surface. In particular, although other factors are important, the composition of the atmosphere to a large extent controls our climate. Levels of the so-called "greenhouse gases" are particularly important. Their concentration in the atmosphere is in turn controlled by the capacity of the oceans and terrestrial ecosystems and soils to absorb carbon emitted as carbon dioxide into the atmosphere. There remain questions related to the absorptive capacity of oceans, especially deep oceans in terms of time required to absorb carbon. There are uncertainties related to the terrestrial ecosystem capacity to sequester carbon and just how much is absorbed by soils. All these issues need to be addressed to have a complete picture of what is being emitted into the atmosphere, how it is distributed in time and space and what it implies about man-induced climate change. We need to discuss the issue of greenhouse gases and what it suggests about climate change.

3. The Greenhouse Effect

It is important to emphasize at the outset that the greenhouse effect is a natural phenomenon. But what is it? The following is a simplified explanation as provided by the Intergovernmental Panel on Climate Change (IPCC):

Shortwave solar radiation can pass through the clear atmosphere relatively unimpeded. But longer-wave terrestrial radiation emitted by the warm surface of the earth is partially absorbed and then re-emitted by a number of trace gases in the cooler atmosphere above. Since, on average, the outgoing long-wave radiation balances the incoming solar radiation, both the atmosphere and the surface will be warmer than they would be without the greenhouse gases. This is the "natural" Greenhouse effect.

The main natural greenhouse gases are not major constituents, nitrogen and oxygen, but water vapour (the biggest contributor), carbon dioxide, methane, nitrous oxide, and ozone in the troposphere (the lowest 10-15 km of the atmosphere) and stratosphere.

Discussions in this presentation will address the question of "enhanced" greenhouse effect." The natural greenhouse effect is necessary and indeed responsible for life on earth as we know it; otherwise, the earth would be about 32°C warmer than it is now. The enhanced greenhouse effect is the result of the addition of greenhouse gases into the atmosphere at a rate faster than they can be absorbed by land surface or oceans, leading to increase in mean global surface temperature.

The IPCC has determined that emissions resulting from human activities are such as to substantially increase the atmospheric concentration of greenhouse gases which will enhance the greenhouse effect, and at the present rate, the mean surface temperature would increase at a rate of 0.3°C per decade. This in turn would lead to a global mean sea-level rise of about 6 cm per decade over the next century.

The consequences for socio-economic systems are estimated to be dire, especially for small island States and the poor developing countries who do not have the resources to combat these impacts. In the next section, I shall discuss the conferences that provided the impetus for political action on a Climate Convention.

4. Studies and Conferences Leading to the Negotiations for a Climate Convention

Until the formation of the IPCC in 1988, the Chief Executives of the UNEP and WMO had constituted the Advisory Group on Greenhouse Gases (AGGG) to advise them on the possible impact on climate and the environment, of the increasing emissions of greenhouse gases, notably CO₂. The AGGG convened the Villach and Bellagio workshop in 1987 which highlighted the threat of global warming. After these workshops, both WMO and UNEP established the IPCC in 1988. It worked on an assessment report which was completed and presented to the Second World Climate Conference in 1990.

Leading to this Conference, there had been high profile conferences in 1988 in Toronto, Canada on the changing atmosphere, the Cairo Conference on preparing for climate change in 1989, the Langkawi Commonwealth Heads of Government Meeting in 1989, the Male Conference on Global Warming and Sea-level Rise in 1989, the Nordic Ministerial Conference on Atmospheric Pollution and Climate Change in 1989, and the Bergen Regional Conference on Action for a Common Future in 1990.

All these conferences helped raise climate change issue to the top of the global political agenda and to catalyze action towards negotiations for a Convention on Climate Change.

5. Scientific Facts About Increase of Greenhouse Gas Concentration on the Atmosphere

The IPCC concluded and stated unequivocally that emissions resulting from human activities are substantially increasing the atmospheric concentrations of greenhouse gases - carbon dioxide, methane, chlorofluorocarbons (CFCs) and nitrous oxide. These increases will increase the greenhouse gases and result in additional warming of the earth's surface.

The IPCC further said that the long-lived greenhouse gases adjust only slowly to changes in emissions, have the continued emission of these gases the present emission rates would be committed to increased concentrations for a long time to come. If emissions continued in a "business-as-usual" scenario, there would need to be greater reductions necessary to stabilize concentrations at a given level.

These statements provide a basis for urgent action articulated in the Second World Climate Conference and other conferences prior to it.

Evidence has been adduced by scientists globally that CO₂ is on the increase at a rate much faster than ever observed. Similarly, methane, nitrous oxide and other greenhouse gases are on the increase. Global Circulation Models calculate that if greenhouse gases equivalent to the doubling of CO₂ are emitted into the atmosphere, we can expect in all versions of the models, an increase in global surface temperatures. But the models also suggest negative feedbacks due to clouds and increased water vapour in a warmer world. These feedbacks, however, remain poorly understood. Indeed they have been used by those detractors of IPCC assessments to suggest that the urgency for responding to potential climate change is unjustified. In some ways, it explains in part the observed lack of specific targets in emission reductions in the Climate Convention.

6. Expected Global Temperature Increase and Natural Climate variability

It is known that mean surface temperature has increased by 0.3°C to 0.6°C over the last 100 years. Over the same period, global sea-level has increased by 10-20cm. This magnitude of increases has been predicted by global circulation models, but they are also of the same magnitude of natural climate variability. So far, we are not able to unequivocally detect the "enhanced" greenhouse effect from observations against natural climate variability. Indeed, no evidence has been adduced to suggest that climate is more variable now than before. We, therefore, have the problem of detectability of climate change over natural variability. Another limitation is that whereas climate models are able to identify the degree of global warming and global change in climate, they have considerable limitations in regional focus of climate change, in addition to the problem of feedbacks.

7. Impacts of Climate Change

Global warming will have an impact first and foremost on the climate system as a whole. This will in turn have an impact on general circulation which, again, will in turn affect weather patterns, in terms of distribution in time and space, of rainfall, temperature, winds, etc. These shifts in weather patterns in the short and long term will have an impact on agriculture and ecosystems. The impacts will affect the economic well-being of societies - the so-called socio-economic impacts. Unfortunately, as pointed out earlier, impacts are best assessed at regional and local levels. These are precisely the levels where the models are not particularly accurate in forecasting the potential for climate change.

The change in sea-level will have particular significance for coastal areas and small island States (especially developing ones). It is this concern that gave rise to specific mention in the Climate Convention of small island countries in article 4 para.8(a).

8. What do Governments Need to Know?

The primary objective as detailed in article 2 of the Convention is:

The ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt, is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.

We have noted that emissions of greenhouse gases are on the increase. We have also drawn attention to the fact that these must be reduced now in order to stabilize concentrations at levels that would not interfere with the climate system.

Governments need to know the following:

- i) What are the emissions, at present, of greenhouse gases in their countries?
- ii) What emissions are necessary and critical for development and what alternative paths exist for development?
- iii) What is the cost of responding to the Convention? In other words, what will it cost to reduce emissions and what development opportunities are lost?

Besides the above, governments must accede to, or ratify the Convention, if they are to benefit from the provisions of the financial mechanism given in the Convention. To the extent that they need to influence the fine tuning of these mechanisms, they need to be parties to the Convention in order to do so during the Conference of the Parties. Governments also need to put in place institutional mechanisms to deal with the implementation of the Convention. A multi-disciplinary team to implement government involvement is, therefore, very important.

**A.2. EXERCISE 1: NATIONAL LEGISLATION
LEGAL DRAFTING OF NATIONAL LEGISLATION TO IMPLEMENT
THE UNITED NATIONS FRAMEWORK CONVENTION ON
CLIMATE CHANGE**

I. LEGISLATIVE OPTIONS

- A.2.1. What are the legislative options available for implementing the Climate Change convention at the national level?

II. OBJECTIVE

- B.2.2 To regulate anthropogenic emissions of greenhouse gases into the atmosphere and enhance their removals by sinks; and thereby contribute to the global efforts to mitigate climate change.

III. SCOPE

- B.2.3. Which greenhouse gases are to be covered by legislation?

IV. ENHANCEMENT OF SINKS

- B.2.4. How can sinks of greenhouse gases be enhanced? Which sinks should be singled out for treatment?

V. INSTITUTIONAL STRUCTURE FOR IMPLEMENTATION

- B.2.5.1. What type of institutional framework is needed for the management of Climate Change issues at the national level and who should be represented on it?
- B.2.5.2. What should be the functions of the institution?

VI. IMPLEMENTATION

- B.2.6. Who should be responsible for the implementation and enforcement of the laws?

A.2.5. Principle of Environment Policy and Law

- a) Principle to take preventive action
Includes the principle to take precautionary action in cases of uncertainty.
- b) Polluter-pays principle
- c) Principle of public participation in decision-making

All interested citizens and groups including environmental NGOs and the business sector should have the opportunity to be involved in decision-making, such as planning, environmental impact assessment, licensing and rule-making; principle implies open procedures of decision-making and provision by the government of relevant environmental information.

A.2. EXERCISE: LEGAL DRAFTING OF NATIONAL LEGISLATION CONVENTION ON CLIMATE CHANGE

Sample Answers:

I. LEGISLATIVE OPTIONS

B.2.1. What are the legislative options available for implementing the Climate Change Convention at the national level?

- a) Amending existing legislation relating to sources of greenhouse gases.
- b) Developing regulations under appropriate existing enabling legislation to regulate emission of greenhouse gases into the atmosphere.
- c) Enactment of an Act of Parliament devoted entirely to addressing climate change issues. This option will give Climate Change issues greater visibility and also indicate that the government recognizes it as an important issue.

II. OBJECTIVE

B.2.2. To regulate anthropogenic emissions of greenhouse gases into the atmosphere and enhance their removals by sinks, and thereby contribute to the global efforts to mitigate climate change.

III. SCOPE

B.2.3. Which greenhouse gases are to be covered by legislation?

- a) Sources of Carbon Dioxide
 - Electricity generating plants powered by either fossil fuels or coal;
 - Transportation - CO₂ emissions from motor vehicles;
 - Emission from industrial plants, e.g. cement factories, petroleum refineries, etc.
- b) Source of Methane
 - Coal mining/processing
 - Livestock
 - Rice paddies
 - Biomass burning
 - Landfills
 - Human and Animal waste
 - Leakage of natural gas from oil and gas wells

IV. ENHANCEMENT OF SINKS

B.2.4. How can sinks of greenhouse gases be enhanced? Which sinks should be singled out for treatment?

- a) Sustainable Management of forests.
- b) Examination of possible role of oceans.

V. INSTITUTIONAL STRUCTURE FOR IMPLEMENTATION

B.2.5.1. What type of institutional framework is needed for the management of climate change issues at the national level and who should be represented on it?

- a) Identification of institutions whose activities are related or contribute to global warming, and this would include the following institutions:
 - Ministry of Energy
 - Ministry of Agriculture/Animal Husbandry
 - Ministry of Industries
 - Ministry responsible for Forestry
 - Ministry of Finance
 - Ministry of Planning
 - Ministry of Foreign Affairs
 - Ministry for Local Administration
 - Meteorological Services
 - Scientific Research Institutions
- b) Determination of focal point for climate change issues at both the national and international level.
- c) Every government will have to determine the appropriate institutional location for the focal point, since issues relating to climate change impact the activities of several ministries.

B.2.5.2. What should be the functions of the Institution?

- d)
 - Policy formulation
 - Economics of fiscal instruments including taxes, levies, charges, tolls, and loan, grant or subsidy programs
 - Energy and fuel efficiency policies and measures for equipment, motors, appliances, vehicles and other energy using devices
 - Energy conservation policies and measures including:
 - Policies and measures designed to promote or require fuel
 - Policies and measures designed to promote or require fuel switching
 - Emissions collection/capture and disposal policies and measures for methane and carbon dioxide
 - Sink enhancement policies and measures including reforestation, afforestation, urban forestry and improved forest management and

agricultural practices

- Research, development and demonstration policies and measures for new technologies
- Co-ordination of activities of other institutions
- Setting of emissions standards
- Enforcement
- Education

VI. IMPLEMENTATION

B.2.6 Who should be responsible for the implementation and enforcement of the law?

- a) Responsibility for the implementation and enforcement of legislation could be entrusted to the Ministry of the department of the environment, as its activities cut across those of several ministries including all those listed above

VII. ENFORCEMENT

B.2.7. What are the tools to be used to obtain maximum compliance with legislation?

Existing provisions relating to air pollution, emissions from motor vehicles, land use and forestry management should be vigorously implemented.

- Imposition of stiff penalties?
- Creation of incentives?
- System of permits and licenses?

B.2.8 Community participation in decision-making - How is this to be achieved?

A.B. BIBLIOGRAPHY OF SELECTED TRAINING MATERIAL:

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- A.3.1. "Report of the Intergovernmental Committee for a Framework Convention on Climate Change on the work of the second part of its fifth session, held at New York from 30 April to 9 May 1992", A/AC.237/18(Part II)/add.1, 15 May 1992.
- A.3.2. "Matters relating to arrangements for the financial mechanism and for technical and financial support to developing country parties: A. implementation of Article 11 (Financial Mechanism), paras 1-4, A/AC.237/26, 19 February 1993.
- A.3.3. "Matters relating to arrangements for the financial mechanism and for technical and financial support to developing country parties: A. implementation of Article 11 (Financial Mechanism, paras 1-4, add.1 (selected background documentation relating to the global environment facility), A/AC.237/26/Add.1, 19 February 1993.
- A.3.4. "Matters relating to commitments. Methodologies for calculations/inventories of emissions and removals of greenhouse gases," A/AC.237/34, 15 July 1993.
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- A.3.6. "Matters relating to commitments. First review of the information communicated by each party included in Annex 1 of the convention", A/AC/237/35 12 August 1993.
- A.3.7. "Dates of signature and ratification of the United Nations Framework Convention on Climate Change", A/AC.237/Inf.10/Rev.2, 16 August 1993.
- A.3.8. "Matters relating to Commitments. Criteria for Joint Implementation," A/AC.237/35, 20 July 1993
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COUNTRY PRESENTATION BY JAMAICA ON THE FRAMEWORK CONVENTION ON CLIMATE CHANGE

Leonie A.M. Barnaby

There are three areas which I wish to cover in this report:

- a) Jamaica and climate change;
- b) Jamaica's position regarding the Framework Convention on Climate Change; and
- c) Some general comments on international environmental conventions.

a) Jamaica and Climate Change

Jamaica is a small island developing State. In recent years, the possible effects of climate change and sea-level rise have taken on more and more importance (most of the environmental studies, plans and projects done in the past ten years do not refer explicitly to climate change as a special concern).

Climate Change and Sea-level Rise

Given the concentration of population, capital stock and natural resources on the coast, the expected sea-level rise will have far-reaching effects on the island. Loss of any or all of our beaches will jeopardize the vital tourist industry which is still so dependent on these resources. Mechanisms must therefore be put in place to rethink development patterns so as to locate capital stock (new industries, etc) in less vulnerable areas. In addition, efforts to diversify the tourism product must be identified.

Climate change is, at least in one respect, already affecting the island. The death of large numbers of coral in 1988 and 1990 has been attributed to the slight increase in the temperature of coastal waters associated with climate changes. The loss of our coral has far-reaching implications in terms of loss of fish habitat and subsequent decrease in fish populations; the loss of the source of beach sand replenishment will also further contribute to the critical status of beach erosion facing the island. This is an early indication of Jamaica's vulnerability to the ecological, social and economic impact of climate change on our coastal and marine zones.

b) Jamaica's position on the Framework Convention on Climate Change (FCCC)

Jamaica has been an active participant in the meetings of the Inter-Governmental Negotiating Committee for the Climate Change Convention, represented by both the Director of the Meteorological Division (Mr. John Blake, Mr. Calvin Gray) and the Adviser on the Environment, Dr. Y.E. Aldridge. Jamaica is now a party to the Vienna Convention and the Montreal Protocol. Jamaica was one of the many countries which signed the Climate Change Convention at Rio in June 1992. Steps towards ratification have been taken in that the comments of the Attorney-General have been obtained.

The Attorney-General's advice is that there is no legal objection to Jamaica's acceding to the Convention and that it does not appear that legislation will be required for its implementation. However, before the approval of the Cabinet can be sought for accession to the Convention, the technical experts will have to comment on its provisions.

It is expected as well that many of the issues concerning the FCCC which affect small island States will be considered at the Global Conference on the Sustainable Development of Small Island Developing States to be held in Barbados sometime in April-May, 1994.

The Action Program being discussed for the Conference notes that while the Convention is expected to make a significant contribution to reducing the threat of climate change, as well as mitigating and assisting countries to adapt to the adverse consequences, it is not clear, however, that the commitments contained in Article 4.2(a) and (b) of the FCCC are adequate in relation to the emission of greenhouse gases. The development and use of renewable energy resources and the implementation of sound and efficient technologies are also seen as having a central role in mitigating the adverse impacts.

In summary, Jamaica proposes to do a thorough review of the FCCC before ratification. It is noted that many provisions of the Convention highlight the need for special measures to take account of the interests and needs of the developing countries. For example, Article 4(7) states: "The extent to which developing countries will effectively implement their commitments under the Convention will depend on the effective implementation by developed countries of their commitments under the Convention related to financial resources and transfer of technology, and will take fully into account that economic and social development and poverty eradication are the first and overriding priorities for the developing country Parties."

But what are the obligations of developing countries? They are based on the generation and dissemination of information, public education, preparation and planning for climate change impact especially on coastal zones, and promotion of sound management of plants, forests and oceans.

Where does Jamaica stand with regard to these and other provisions of the Convention? First, the agencies to deal with the effects of climate change and sea-level rise are well-established. These are: the Meteorological Division, for climate-change monitoring; the Office of Disaster Preparedness and Emergency Response, for planning for disasters; the Ministry of Public Utilities, Mining and Energy, for the development of energy policy; the Ministry of Water and Transport, for the development of a transport policy; and Natural Resources Conservation Authority, responsible for environmental management and actively involved in programs for pollution control, public education and the development of a coastal zone management plan.

Jamaica has yet however to prepare a Country Study on Climate Change. The United States Government recently offered support for the preparation of a study under its Climate Change Country Studies Initiative.

The main things that Jamaica needs to do in this area can be summarized as follows:

1. Preparation of a climate change study;
2. Preparation of a coastal zone management plan;
3. Examination of the FCCC by the inter-agency technical advisory committee; and
4. Thorough participation in the Global Conference on the Sustainable Development of Small Island Developing States by both Government and NGO representatives, to ensure the full ventilation of the issues and transmission of the information to the public and the decision-makers.

In terms of implementation of the Convention, much of what is required is already in place or exists even in a very basic stage, but technical and financial assistance, and commitment on the part of all involved, will be needed.

c) Some General Comments on the Convention

There are several environmental conventions in existence with varying benefits, obligations and costs, and protocols to follow. There are also pressures for accession to the treaties and in many cases, accession becomes an end in itself. It is understood that at the regional level, the Caribbean Community (CARICOM) has been analyzing certain conventions with a view to deciding which ones should be ratified.

It seems to me that we need to take stock of the conventions we have already ratified, those we propose to ratify and those which are being developed. The conventions are overwhelming and Jamaica does not have the resources to participate adequately in the negotiations and the follow-up to the conventions. The approach we are taking is to establish an inter-agency committee comprised of representatives of a core group of agencies - environmental, legal, foreign affairs and other technical agencies as relevant to the particular convention being considered. A priority list of conventions for review has been prepared. An important element of this review is that all relevant agencies (including NGOs) are being kept informed of developments. Accession to the conventions must be done over time and to some purpose. The UNEP/UNITAR course on environmental law and policy is welcome. It focusses on the conventions, and the opportunities for discussion of approaches to implementation and strategies to deal with problems will provide invaluable guidance for all participants.

**LECTURE HAND-OUT
ON
"EXAMINATION OF
LEGAL AND INSTITUTIONAL ISSUES"**

THE CONVENTION ON BIOLOGICAL DIVERSITY

OUTLINE OF LECTURE

- 1.10 Brief history of the Convention
- 1.11 Issues addressed by the Convention
- 1.12 Preamble and jurisdictional scope
- 1.13 General obligations
- 1.14 Specific obligations
- 1.15 Financial matters
- 1.16 Legal and institutional implementation

The Convention can be distinguished as a landmark in the history of conventions from several aspects:

1. It is the first time that biodiversity is comprehensively addressed;
2. It is the first time genetic diversity is specifically covered in a binding international treaty;
3. It is the first time that the conservation of biodiversity is recognized as the common concern of humankind;
4. It is the first time that issue such as access to and use of genetic resources have been included in an international Convention;
5. And by including technology transfer and biosafety, the parties have shown a will to include all ramifications of biodiversity;
6. Finally, in the Convention, a mechanism has been created to provide funds to developing countries in order to help them implement the Convention. By doing this, the signatories recognize a need for new and additional resources to flow from North to South.

CONVENTION ON BIOLOGICAL DIVERSITY

PREAMBLE

The contracting parties,

- * Conscious of the intrinsic value of biological diversity and of the ecological, genetic, social, economic, scientific, educational, cultural, recreational and aesthetic values of biological diversity and its components,
- * Conscious also of the importance of biological diversity for evolution and for maintaining life sustaining systems of the biosphere,
- * Affirming that the conservation of biological diversity is a common concern of humankind,
- * Reaffirming that states have sovereign rights over their own biological resources,
- * Reaffirming also that states are responsible for conserving their biological diversity and for using their biological resources in a sustainable manner,
- * Concerned that biological diversity is being significantly reduced by certain human activities,
- * Aware of the general lack of information and knowledge regarding biological diversity and of the urgent need to develop scientific, technical and institutional capacities to provide the basic understanding upon which to plan and implement appropriate measures,
- * Noting that it is vital to anticipate, prevent and attack the causes of significant reduction or loss of biological diversity at source,
- * Noting also that where there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize such a threat,
- * Noting further that the fundamental requirement for the conservation of biological diversity is the in-situ conservation of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings,
- * Noting further that ex-situ measures, preferably in the country of origin, also have an important role to play,
- * Recognizing the close and traditional dependence of many indigenous and local communities embodying traditional lifestyles on biological resources, and the desirability of sharing equitably benefits arising from the use of traditional knowledge, innovations and practices relevant to the conservation of biological diversity and the sustainable use of its components,
- * Recognizing also the vital role that women play in the conservation and sustainable use of biological diversity and affirming the need for the full participation of women at all levels of policy-making and implementation for biological diversity conservation,
- * Stressing the importance of, and the need to promote, international, regional and global cooperation among states and intergovernmental organizations and the non-governmental sector for the conservation of biological diversity and the sustainable use of its components,

- * Acknowledging that the provision of new and additional financial resources and appropriate access to relevant technologies can be expected to make a substantial difference in the world's ability to address the loss of biological diversity,
- * Acknowledging further that special provision is required to meet the needs of developing countries, including the provision of new and additional financial resources and appropriate access to relevant technologies,
- * Noting in this regard the special conditions of the least developed countries and small island states. Acknowledging that substantial investments are required to conserve biological diversity and that there is the expectation of a broad range of environmental, economic and social benefits from those investments,
- * Recognizing that economic and social development and poverty eradication are the first and overriding priorities of developing countries,
- * Aware that conservation and sustainable use of biological diversity is of critical importance for meeting the food, health and other needs of the growing world population, for which purpose access to and sharing of both genetic resources and technologies are essential,
- * Noting that, ultimately, the conservation and sustainable use of biological diversity will strengthen friendly relations among states and contribute to peace for humankind.
Desiring to enhance and complement existing international arrangements for the conservation of biological diversity and sustainable use of its components, and
- * Determined to conserve and sustainable use biological diversity for the benefit of present and future generations,

Have agreed as follows:

ART. 1 SETS OUT THE OBJECTIVES AGREED BY THE PARTIES

Here the focus is on conservation and sustainable use and an emphasis on action at the national level.

The Article states the objectives of the Convention and covers its main themes. Dividing the articles into its component parts, it sets out the objectives of the Convention as follows:

- The conservation of biological diversity (Art. 6-9 and 11-14);
- The sustainable use of biological resources (Art. 6, 10-13);
- The fair and equitable sharing of the benefits arising out of utilization of genetic resources, including:

By appropriate

- Access to genetic resources (Art. 15)
- Transfer of relevant technologies (Art. 16 and 19)
- Funding (Art. 20 and 21)

ARTICLE 1. OBJECTIVES

The objectives of this Convention, to be pursued in accordance with its relevant provisions, are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding.

ARTICLE 3. PRINCIPLE

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.

ARTICLE 4. JURISDICTIONAL SCOPE

Subject to the rights of other States, and except as otherwise expressly provided in this Convention, the provisions of this Convention apply, in relation to each contracting party:

- a) In the case of components of biological diversity, in areas within the limits of its national jurisdiction; and
- b) In the case of processes and activities, regardless of where their effects occur, carried out under its jurisdiction or control, within the area of its national jurisdiction or beyond the limits of national jurisdiction.

ARTICLE 6. GENERAL MEASURES FOR CONSERVATION AND SUSTAINABLE USE

Each contracting party shall, in accordance with its particular conditions and capabilities:

- a) Develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity, or adapt for this purpose existing strategies, plans or programmes which shall reflect, inter alia, the measures set out in this Convention relevant to the contracting party concerned; and
- b) Integrate, as far as possible and as appropriate, the conservation and sustainable use for biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies.

ARTICLE 7. IDENTIFICATION AND MONITORING

Each contracting party shall, as far as possible and as appropriate, in particular for the purpose of Article 8 to 10:

- a) Identify components of biological diversity important for its conservation and sustainable use having regard to the indicative list of categories set down in Annex 1;
- b) Monitor, through sampling and other techniques, the components of biological diversity identified pursuant to subparagraph (a) above, paying particular attention to those requiring urgent conservation measures and those which offer the greatest potential for sustainable use;

- c) Identify processes and categories of activities which have, or are likely to have, significant adverse impacts on the conservation and sustainable use of biological diversity, and monitor their effects through sampling and other techniques; and
- d) Maintain and organize, by any mechanism data derived from identification and monitoring, activities pursuant to subparagraphs (a), (b) and (c) above.

ARTICLE 8. IN-SITU CONSERVATION

Each contracting party shall, as far as possible and as appropriate:

- a) Establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity;
- b) Develop, where necessary, guidelines for the selection, establishment and management of protected areas or areas where special measures need to be taken to conserve biological diversity.
- c) Regulate or manage biological resources important for the conservation of biological diversity whether within or outside protected areas, with a view to ensuring their conservation and sustainable use;
- d) Promote the protection of ecosystems, natural habitats and the maintenance of viable population of species in natural surroundings;
- e) Promote environmentally sound and sustainable development in areas adjacent to protected areas with a view to furthering protection of these areas;
- f) Rehabilitate and restore degraded ecosystems and promote the recovery of threatened species, *inter alia*, through the development and implementation of plans or other management strategies;
- g) Establish or maintain means to regulate, manage or control the risks associated with the use and release of living modified organisms resulting from biotechnology which are likely to have adverse environmental impacts that could affect the conservation and sustainable use of biological diversity, taking also into account the risks to human health;
- h) Prevent the introduction of, control or eradicate, those alien species which threaten ecosystems, habitats or species;
- i) Endeavor to provide the conditions needed for compatibility between present uses and the conservation of biological diversity and the sustainable use of its components;
- j) Subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices, and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices;
- k) Develop or maintain necessary legislation and/or other regulatory provisions for the protection of threatened species and populations;

- l) Where a significant adverse effect on biological diversity has been determined pursuant to Article 7, regulate or manage the relevant processes and categories of activities; and
- m) Cooperate in providing financial and other support for in-situ conservation outlined in subparagraphs (a) to (l) above, particularly to developing countries.

ARTICLE 9. EX-SITU CONSERVATION

Each contracting party shall, as far as possible and as appropriate, and predominantly for the purpose of complementing in-situ measures:

- a) Adopt measures for the ex-situ conservation of components of biological diversity, preferably in the country of origin of such components;
- b) Establish and maintain facilities for ex-situ conservation of, and research on, plants, animals and micro-organisms, preferably in the country of origin of genetic resources;
- c) Adopt measures for the recovery and rehabilitation of threatened species and for their reintroduction into their natural habitats under appropriate conditions;
- d) Regulate and manage collection of biological resources from natural habitats for ex-situ conservation purposes so as not to threaten ecosystems and in-situ populations of species, except where special temporary ex-situ measures are required under subparagraph (c) above; and
- e) Cooperate in providing financial and other support for ex-situ conservation outlined in subparagraphs (a) to (d) above and in the establishment and maintenance of ex-situ conservation facilities in developing countries.

ARTICLE 10. SUSTAINABLE USE OF COMPONENTS OF BIOLOGICAL DIVERSITY

Each contracting party shall, as far as possible and as appropriate:

- a) Integrate consideration of the conservation and sustainable use of biological resources into national decision-making;
- b) Adopt measures relating to the use of biological resources to avoid or minimize adverse impacts on biological diversity;
- c) Protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements.
- d) Support local populations to develop and implement remedial action in degraded areas where biological diversity has been reduced; and
- e) Encourage cooperation between its governmental authorities and its private sector in developing methods for sustainable use of biological resources.

ARTICLE 15: ACCESS TO GENETIC RESOURCES

1. Recognizing the sovereign rights of States over their natural resources, the authority to determine access to genetic resources rests with the national governments and is subject to national legislation.
2. Each contracting party shall endeavor to create conditions to facilitate access to genetic resources for environmentally sound uses by other contracting parties and not to impose restrictions that run counter to the objectives of this Convention.
3. For the purpose of this Convention, the genetic resources being provided by a contracting party, as referred to in this Article and Articles 16 and 19, are only those that are provided by contracting parties that are countries of origin of such resources or by the parties that have acquired the genetic resources in accordance with this Convention.
4. Access, where granted, shall be on mutually agreed terms and subject to the provisions of this Article.
5. Access to genetic resources shall be subject to prior informed consent of the contracting party providing such resource, unless otherwise determined by that party.
6. Each contracting party shall endeavor to develop and carry out scientific research based on genetic resources provided by other contracting parties with the full participation of, and where possible in, such contracting parties.
7. Each contracting party shall take legislative, administrative or policy measure, as appropriate, and in accordance with Articles 16 and 19 and, where necessary, through the financial mechanism established by Articles 20 and 21 with the aim of sharing in a fair and equitable way, the results of research and development and the benefits arising from the commercial and other utilization of genetic resources with the contracting party providing such resources. Such sharing be upon mutually agreed terms.

ARTICLE 16. ACCESS TO AND TRANSFER OF TECHNOLOGY

1. Each contracting party, recognizing that technology includes biotechnology, and that both access to and transfer of technology among contracting parties are essential elements for the attainment of the objectives of this Convention, undertakes, subject to the provisions of this Article, to provide and/or facilitate access for and transfer to other contracting parties of technologies that are relevant to the conservation and sustainable use of biological diversity or make use of genetic resources and do not cause significant damage to the environment.
2. Access to, and transfer of, technology referred to in paragraph 1 above to developing countries shall be provided and/or facilitated under fair and most favourable terms, including on concessional and preferential terms where mutually agreed and, where necessary, in accordance with the financial mechanism established by Article 20 and 21. In the case of technology subject to patents and other intellectual property rights, such access and transfer shall be provided on terms which recognize and are consistent with the adequate and effective protection of intellectual property rights. The application of this paragraph shall be consistent with paragraph 3, 4 and 5 below.
3. Each contracting party shall take legislative, administrative or policy measures as appropriate, with the aim that contracting parties, in particular those that are developing countries, which provide genetic resources are provided access to transfer and of technology which makes use of those resources, on

mutually agreed terms, including technology protected by patents and other intellectual property rights, where necessary, through the provisions of Articles 20 and 21 and in accordance with international law and consistent with paragraph 4 and 5 below.

4. Each contracting party shall take legislative, administrative or policy measures as appropriate, with the aim that the private sector facilitates access to joint development and transfer of technology referred to in paragraph 1 above, for the benefit of both governmental institutions and the private sector of developing countries and in this regard, shall abide by the obligations included in paragraphs 1, 2 and 3 above.

5. The contracting parties, recognizing that patents and other intellectual property rights may have an influence on the implementation of this Convention, shall cooperate in this regard subject to national legislation and international law in order to ensure that such rights are supportive of, and do not run counter to, its objectives.

ARTICLE 19. HANDLING OF BIOTECHNOLOGY AND DISTRIBUTION OF ITS BENEFITS.

1. Each contracting party shall take legislative or policy measures, as appropriate, to provide for the effective participation in biotechnological research activities by those contracting parties, especially developing countries, which provide the genetic resources for such research and, where feasible, in such contracting parties.

2. Each contracting party shall take all practicable measures to promote and advance priority access on a fair and equitable basis by contracting parties, especially developing countries, to the results and benefits arising from biotechnologies based upon genetic resources provided by those contracting parties. Such access shall be on mutually agreed terms.

3. The parties shall consider the need for, and modalities of, a protocol setting out appropriate procedures, including, in particular, advance informed agreement, in the field of the safe handling and use of any living modified organisms resulting from biotechnology that may have adverse effect on the conservation and sustainable use of biological diversity.

4. Each contracting party shall, directly or by requiring any natural or legal person under its jurisdiction providing the organisms referred to in paragraph 3 above, provide any available information about the use and safety regulations required by that contracting party in handling such organisms, as well as any available information on the potential adverse impact of the specific organisms concerned to the contracting party into which those organisms are to be introduced.

ARTICLE 20. FINANCIAL RESOURCES

1. Each contracting party undertakes to provide, in accordance with its capabilities, financial support and incentives in respect of those national activities which are intended to achieve the objectives of this Convention, in accordance with its national plans, priorities and programmes.

2. The developed country parties shall provide new and additional financial resources to enable developing country parties to meet the agreed full incremental costs to them of implementing measures which fulfil the obligations of this Convention and to benefit from its provisions and which costs are agreed between a developing country party and the institutional structure referred to in Article 21, in accordance with policy, strategy, programme priorities and eligibility criteria and an indicative list of incremental costs established by the Conference of the Parties. Other parties, including countries undergoing the process of transition to a market economy, may voluntarily assume the obligations of the developed country parties. For the purpose of this article, the Conference of the Parties, shall, at its first meeting, establish

a list of developed country parties and other parties which voluntarily assume the obligations of the developed country parties. The Conference of the Parties shall periodically review and, if necessary, amend the list. Contributions from other countries and sources on a voluntary basis would also be encouraged. The implementation of these commitments shall take into account the need for adequacy, predictability and timely flow of funds and the importance of burden-sharing among the contributing parties included in the list.

3. The developed country parties may also provide, and developing country parties avail themselves of, financial resources related to the implementation of this Convention through bilateral, regional and other multilateral channels.

4. The extent to which developing country parties will effectively implement their commitments under this Convention will depend on the effective implementation by developed country parties of their commitments under this Convention related to financial resources and transfer of technology and will take fully into account the fact that economic and social development and eradication of poverty are the first and overriding priorities of the developing country parties.

5. The parties shall take full account of the specific needs and special situation of least developed countries in their actions with regard to funding and transfer of technology.

6. The contracting parties shall also take into consideration the special conditions resulting from the dependence on, distribution and location of, biological diversity within developing country parties, in particular small island States.

7. Consideration shall also be given to the special situation of developing countries, including those that are most environmentally vulnerable, such as those with arid and semi-arid zones, coastal and mountainous areas.

ARTICLE 21. FINANCIAL MECHANISMS

1. There shall be a mechanism for the provision of financial resources to developing country parties for purpose of this Convention, on a grant or concessional basis, the essential elements of which are described in this Article. The mechanism shall function under the authority and guidance of, and be accountable to, the Conference of the Parties for purposes of this Convention. The operations of the mechanism shall be carried out by such institutional structure as may be decided upon by the Conference of the Parties at its first meeting. For purposes of this Convention, the Conference of the Parties shall determine the policy, strategy, programme priorities and eligibility criteria relating to the access to, and utilization of, such resources. The contributions shall be such as to take into account the need for predictability, adequacy and timely flow of funds referred to in Article 20, in accordance with the amount of resources needed, to be decided periodically by the Conference of the Parties and the importance of burden-sharing among the contributing parties included in the list referred to in Article 20, paragraph 2. Voluntary contributions may also be made by the developed country parties and by other countries and sources. The mechanism shall operate within a democratic and transparent system of governance.

2. Pursuant to the objectives of this Convention, the Conference of the Parties shall, at its first meeting, determine the policy, strategy and programme priorities, as well as detailed criteria and guidelines for eligibility for access to, and utilization of, the financial resources including monitoring and evaluation on a regular basis of such utilization. The Conference of the Parties shall decide on the arrangements to give effect to paragraph 1 above after consultation with the institutional structure entrusted with the question of the financial mechanism.

3. The Conference of the Parties shall review the effectiveness of the mechanism established under this Article, including the criteria and guidelines referred to in paragraph 2 above, not less than two years after the entry into force of this Convention and thereafter on a regular basis. Based on such review, it shall take appropriate action to improve the effectiveness of the mechanism, if necessary.

4. The contracting parties shall consider strengthening existing financial institutions to provide financial resources for the conservation and sustainable use of biological diversity.

ARTICLE 39. FINANCIAL INTERIM ARRANGEMENTS

Provided that it has been fully restructured in accordance with the requirements of Article 21, the Global Environment Facility of the United Nations Development Programme, the United Nations Environment Programme and the International Bank for Reconstruction and Development shall be the institutional structure referred to in Article 21 on an interim basis, for the period between the entry into force of this Convention and the first meeting of the Conference of the Parties or until the Conference of the Parties decides which institutional structure will be designated in accordance with Article 21.

B.1. PRESENTATION OUTLINE (PART 2)

CONVENTION ON BIOLOGICAL DIVERSITY

Examination of Legal Institutional Issues

Presented by:
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B.1.1. Brief history of the development of the Convention

- a) Since about 1984, pressure mainly from scientists to act internationally against biodiversity loss.
- b) Process from 1987: Governing Council decisions, Ad Hoc Working Group of Experts, Intergovernmental Negotiating Committee, UNCED; and rational use of biological (see: Nairobi Final Act, part. 6)

B.1.2. Issues addressed by the Convention

- a) Conservation and sustainable use of biodiversity, in-situ and ex-situ conservation
- b) Sovereignty over natural resources and international responsibility
- c) International cooperation, especially "North" and "South"
- d) Most contentious: access to genetic resources, transfer of (bio) technology, intellectual property rights and biodiversity; financial mechanism
- e) Institutional mechanism

B.1.3 Preamble, definitions, jurisdictional scope

- a) Intrinsic value of biodiversity; common concern of humankind; for the benefit of present and future generations
- b) Article 2: definition of biological diversity, in-situ, ex-situ, genetic resources biotechnology and sustainable use
- c) Article 4: jurisdictional scope - within/beyond the limits of national jurisdiction

B.1.4. General obligations

- a) Article 1: objectives - conservation, sustainable use, equitable sharing of benefits
- b) Article 3: general principle - legally binding repetition of Stockholm Principle 21
- c) Article 5: international cooperation

B.1.5 Special obligations

- a) Article 6: basis measures for conservation and sustainable use
 - i) development of a "national biodiversity action plan"
 - ii) integration of biodiversity matters into relevant sectoral or cross-sectoral policies
- b) Article 10: in addition to Article 6:
 - i) protection of sustainable customary use of biological resources
 - ii) support of local populations in improving degraded areas
 - iii) cooperation with the private sector
- c) Article 8: in-situ conservation:
 - i) System of protected areas
 - ii) ecosystem conservation outside protected areas
 - iii) restoration of degraded ecosystems
 - iv) rules to control introduction of alien species
 - v) efforts to maintain indigenous knowledge
- d) Article 9: ex-situ conservation:
 - i) complementing in-situ measures (secondary)
 - ii) facilities for conservation and research
 - iii) rehabilitation and reintroduction
 - iv) collection management and cooperation
- e) Article 7 + Annex 1: identification and monitoring
- f) Article 12: research and training
- g) Article 13: public education and awareness

- h) Article 17: exchange of information
- i) Article 18: technical and scientific cooperation
- j) Article 14: environmental impact assessment and minimizing adverse impacts:
 - i) introduction of EIA procedures in order to limit biodiversity loss
 - ii) notification, exchange of information and consultation in the case of potentially adverse activities
 - iii) early notification in the case of danger or damage
 - iv) development of emergency responses
 - v) mandate to the COP to address the issue of liability
- k) Article 15: access to genetic resources:
 - i) Principle of sovereignty over natural resources
 - ii) facilitation of access
 - iii) access on mutually agreed terms and subject of prior informed consent
 - iv) fair and equitable sharing of benefits
- l) Article 16: access to and transfer of technology:
 - i) facilitation of access
 - ii) facilitation of transfer
 - iii) special conditions for developing countries
 - iv) issue of intellectual property rights
- m) Article 19: biotechnology
 - i) effective participation in biotechnological research
 - ii) priority access to the results and benefits
 - iii) information about handling biotechnology
- n) Article 8(g), 19 para. 3: issue of biosafety:
 - i) rules to control the risk of release of living modified organisms
 - ii) request to develop a protocol on the "safe transfer, handling and use of any living modified organism resulting from biotechnology that may have adverse

effects on the conservation and sustainable use of biological diversity" (biosafety protocol); see also Res. 2 para. 2(c) of the Nairobi Final Act.

B.1.6. Financial matters

- a) Article 20: new and additional financial resources; special situation of developing countries, small island States, etc.
- b) Article 21: special financial mechanisms
Article 39: interim mechanism - GEF

B.1.7. Legal and institutional implementation

- a) Convention as a framework; protocols, amendments, annexes (Article 28)
- b) Conference of the Parties (Article 23); Secretariat (Art. 40); Subsidiary Body on Scientific, Technical and Technological Advice (Article 25).

B.1.8. Article 26: obligation to present reports

B.1.9. Article 27: Annex II; settlement of disputes

B.1.10. Article 37: no reservations

B.1.11. Current status

- a) 31 ratifications, entry into force: 29 December 1993 (90th day after 30th ratification)
- b) First ICCBD meeting in October 1993 (see Res. 2 of the Nairobi Final Act), established an open-ended intergovernmental meeting on scientific experts on the convention on Biological Diversity
- c) *Inter alia*: Meeting of the open-ended intergovernmental meeting on scientific experts on the Convention on Biological Diversity, early 1994; ICCBD, mid-1994; CoP, end of 1994.

SUMMARY OF LECTURE ON BIOLOGICAL DIVERSITY

The formal negotiating process for a Convention on Biological Diversity started in February 1991. The Intergovernmental Negotiating Committee held five negotiating sessions which culminated in the adoption of the agreed text of the Convention on 22 May 1992 in Nairobi, Kenya.

The Convention has certain specific characteristics which distinctly separates it from other international environmental treaties. It is particularly the first time that:

- a) a Convention takes a comprehensive rather than a sectoral approach to conservation and sustainable use;
- b) it is up to the individual country how most of the provisions in a Convention text should be implemented;
- c) a Convention for the conservation of biodiversity has no list or annexes of sites of species for protection, but leaves the main decision-making at the national level;
- d) genetic diversity is covered in a binding international treaty;
- e) the conservation of biodiversity is addressed as the common concern of humankind;
- f) a convention addresses access to, and use of, genetic resources and technology transfer and biosafety;
- g) a mechanism has been created to provide funds to developing countries to assist them in implementing the Convention.

By including into the text of the Convention issues such as access to genetic resources, sharing of benefits from the use of genetic material and access to technology, including biotechnology, the Convention goes beyond the conservation of biodiversity *per se* and the sustainable use of biological resources.

In the scope of application of the Convention, there is a distinction between two types of provisions:

- a) Those dealing with **components** of biological diversity; and,
- b) Those dealing with **processes** of activities.

The general obligations in the Convention sets out the objective agreed by the parties focussing on conservation and sustainable use and emphasizing action at the national level. The sovereign right of States over their natural resources is also emphasized, reproducing verbatim Principle 21 of the Stockholm Declaration.

Under the specific obligations of the Convention, three major points can be highlighted;

- a) The Convention consistently makes a distinction between conservation and sustainable use. To emphasize the importance attached to the use of biological resources, "sustainable use" is defined in the Convention text, while "conservation" has no set definition and is used in the text both in a broad and in a narrow sense.

- b) Many articles under the specific obligations have been presupposed by qualifiers, the purpose of which is to make the level of implementation commensurate with the capacity of the party to meet certain obligations.
- c) There is a distinct focus at the national level which ties up with the fact that it is mainly at the national and local levels that biodiversity can effectively be conserved and resources successfully managed.

The Convention recognizes that the authority to determine access to genetic resources is to be determined by the national governments, subject to national legislation. Access to results and benefits must be given on a bilateral level in order for the providers to obtain fair and equitable shares of the benefits, if and when these are realized. These arrangements must be made on mutually agreed terms.

Access-related issues in the Convention can be distinguished into three types:

- a) Access to the providing States to benefits which ultimately have been gained from the use of genetic material in the development of biotechnology;
- b) Access to relevant technology including biotechnology;
- c) Access to genetic resources, which should be recognized subject to national authority.

On financial matters, the Convention establishes that resources are to be new and additional and will be required to enable developing country parties to meet the agreed full incremental costs for the measures needed to implement the obligations of the Convention. What exactly the "incremental costs" are has to be agreed on bilaterally between each developing country party and the institution which handles the financial mechanism.

The Global Environment Facility (GEF) is mentioned in the Convention text as the institutional structure operating the financial mechanism on an interim basis and conditioned on its restructuring. The financial mechanism will provide financial resources to developing countries on a grant or concessional basis, under the authority of the Conference of the Parties to which it is directly accountable.

The main thrust of the legal and institutional implementation lies at the national level where a large spectrum of action will have to be undertaken and a wide range of policies reviewed. This finally depends on the will of all the parties to meet the obligations set out in the Convention text.

COUNTRY PRESENTATION BY MADAGASCAR ON BIODIVERSITY

Francoise Ravaodrimalala

Introduction

Madagascar is an island in the Indian Ocean with a total land size of 594,000 square kilometres, separated from the rest of Africa by the Mozambique Channel. It is characterized by extraordinary varieties of flora and fauna and a mild climate. Because of its separation from the rest of Africa more than 165 million years ago, this contributed to a long period for the evolution of its flora and fauna, conspicuous for its originality. Thus, approximately 86% of Madagascar's plant species, 95% of its reptiles and 75% of its air fauna are native to Madagascar, and cannot be found anywhere else in the world. It has a very high level of endemism: about 75% of the country's 200,000 species have already been evaluated.

Environmental Legislation

The main body of environment legislation is contained in the Environment Charter (see Legislation 90.333 of 21 December 1990). The National Environment Office deals with the country's environmental projects and programs. A National Environment Action Plan was prepared in 1987.

Some of the factors which have contributed to present day environment challenges in Madagascar include a historical tendency to place greater emphasis on the country's political and economic problems. This has often resulted in environment problems being relegated to secondary importance. Population growth rates have also exceeded agricultural production. Forest resources have tended to suffer from depletion as a consequence of bushfires and irrational exploitation for both domestic and commercial purposes, especially for timber and charcoal. Unequal and uneven population distributions have had their own impacts on the natural environment. This has sometimes been compounded by traditional systems of agricultural production and unsustainable land use practices. The level of awareness about environment problems needs to be raised so that greater sensitivity to the challenges they present exists. It should also be mentioned that the co-ordination of funding from donor agencies needs to be more focussed and structured so that financial resources are rationally utilized. National environment capacities can also be strengthened by greater financial resources being directed towards environment problems. Also, human resources capabilities, both qualitatively and in terms of numbers, needs to be strengthened. A dearth of data upon which sound planning can be based appears also to be lacking. Finally, although I would consider that the current legislation is adequate, its enforcement and application are more problematical, and present their own challenges.

Environment Action Plan

The main concerns under the Environment Action Plan are land conservation, biodiversity, energy resources assessment, urban environment, education, training and environmental awareness. These are to ensure an integration of the population with the environment, and to facilitate national development plans.

The conservation and management of biodiversity is a key feature of the Action Plan. There are plans to create protected areas and to coordinate conservation with the requirements of tourism. The emphasis now is on the protection of natural areas, and inventories on this are being established. There are also plans to reduce forest destruction and stability to forest areas in being addressed through the "National Forest Property" concept. In this process, attempts are made to ensure that local communities are aware of government policy, and their participation is actively encouraged. Government's aims in this regard are to allow development to proceed through the rational exploitation of resources, and at the same time to

increase the building of national capacities to better control and manage natural resources, whether through the formulation of policy, or through more effective administrative systems of management. Ecotourism is a good illustration of how these objectives can be successfully combined.

There are intentions to introduce new and innovative solutions to the diverse environmental problems faced by Madagascar. In this process, pioneering methods in conservation, research and management will be utilized. Also, experimental institutional and organizational arrangements for protecting ecosystems will be employed. Again, the emphasis is on getting local communities involved in what government is doing. It is hoped that these plans can be sustained by long term funding mechanisms. This will assist the determination of policy, future strategies, programme priorities and eligibility criteria.

PART 1

B.2. EXERCISE ON THE CONVENTION ON BIOLOGICAL DIVERSITY

Working Group 2: In-Situ Conservation

The participants will be required to draft elements of national legislation for the in-situ conservation of biodiversity, thereby implementing Art. 8 of the Convention (for the definition of "in-situ conservation", see Art. 2 of the Convention).

The draft elements may include provisions on:

- B.2.1 Establishing and administering a system/network of protected areas (of different intensity);
- B.2.2. Providing a legal framework for ecosystem conservation outside protected areas;
- B.2.3. The problem of restoring already degraded ecosystems;
- B.2.4. The problem of controlling the introduction of alien species, and/or
- B.2.5. Providing the legal and administrative regime to protect indigenous knowledge.

Materials:

- Art. 8 of the Convention;
- WCMC, Global Biodiversity Status report, 1992, p.441-and 494;
- FAO report on Kenyan and Gambian wildlife legislation.
- National legislation on wildlife conservation and protected areas from Zambia, Gambia, Norway.
- Article: M. Chandler, The Biodiversity Convention...esp.p. 154-and 166.

TRAINING PROGRAMME ON BIODIVERSITY

ADDITION TO "PART I: DRAFTING NATIONAL LEGISLATION"

Working Group 1: National Biodiversity Action Plan

The participants will be required to either draft main elements of a "National Biodiversity Action Plan" or create a set of general policy guidelines for national biodiversity protection and thereby implementing Art. 6 of the Convention on Biological Diversity.

Topics to be discussed could, based on the Group's wish, include;

- The national policy framework for biodiversity conservation, considering *inter alia*:
 - : To reform existing public policies that invite the waste or misuse of diversity;
 - : To adopt new public (land use) policies and new accounting methods which will promote the conservation and sustainable use of biodiversity;
 - : To reduce demand for biological resources.
- Conditions and incentives for local biodiversity conservation, considering *inter alia*:
 - : To correct imbalances in the control of land and resources that cause biodiversity loss and develop new resource management partnerships between government and local communities;
 - : To expand and encourage the sustainable use of products and services from nature for local benefits;
 - : To ensure that those who possess local knowledge of genetic resources benefit appropriately when it is used.
- The management of biodiversity throughout the human environment, considering *inter alia*:
 - : To create the institutional conditions for regional conservation and development of biological resources;
 - : To support biodiversity conservation initiatives in the private sector;
 - : To incorporate biodiversity conservation into the management of biological resources.

- The strengthening of protected areas, considering *inter alia*:
 - : To identify national priorities for strengthening protected areas;
 - : To develop a national/regional network of protected areas;
 - : To ensure the sustainability of protected areas and their contribution to biodiversity conservation.
- The conservation of species, populations and genetic diversity, considering *inter alia*:
 - : To strengthen the capacity to conserve biodiversity in natural habitats;
 - : To strengthen the capacity of off-site conservation facilities.
- Human capacity to conserve biodiversity, considering *inter alia*:
 - : To increase appreciation and awareness of the values and importance of biodiversity;
 - : To help institutions disseminate the information needed to conserve biodiversity and mobilize its benefits;
 - : To promote basic and applied research on biodiversity conservation;
 - : To develop more human capacity for biodiversity conservation.

Materials:

- Art. 6 of the Convention
- India, sec. 5.2.3. of the National Conservation Strategy, 1992
- ECE, Code of Practice for the Conservation of Threatened Animals and Plants.

Working Group 2: In-Situ Conservation

The participants will be required to draft main elements of national legislation for the in-situ conservation of biodiversity, thereby implementing Art. 8 of the Convention (for the definition of "in-situ conservation", see Art. 2 of the Convention).

The draft elements may include provisions on:

- Establishing and administrating a system/network of protected areas;
- Providing a legal framework for ecosystem conservation outside protected areas;
- Consider the problem of how to restore already degraded ecosystems;
- Consider the problem of controlling the introduction of alien species; and/or
- Providing the legal and administrative regime to protect indigenous knowledge.

Materials:

- Art. 8 of the Convention
- WCMC, Global Biodiversity Status Report, 1992, p.441-and 494-
- FAO report on Kenyan and Gambian Wildlife legislation
- National legislation on wildlife conservation and protected areas from Zambia, Gambia and Norway
- Article: M.Chandler, The Biodiversity Convention...esp.p.154 and 166.

Working Group 3: Environmental Impact Assessment

The participants will be required to draft main elements of national legislation on environmental impact assessment in order to protect their countries' biological wealth, and, thereby implementing Art. 14 of the Biodiversity Convention.

The draft elements may include provisions on:

- The definition of terms;
- The general purpose;
- Cases where EIA is required, e.g. with an annex listing certain projects;
- The special treatment of certain large-scale projects;

- Exceptional cases (where EIA is not required);
- A special EIA agency or authority;
- The requirements of a uniform and meaningful assessment study;
- The administrative process;
- Cooperation in cases of trans-border projects;
- Judicial review.

This group may also, if there is time, discuss elements of land use legislation affecting biodiversity and/or of legislation concerning emergency cases.

Materials:

- Art. 14 of the Convention;
- Exemplary national legislation: Canada, Environmental Assessment Act, 1992;
- UN Convention on Environmental Impact Assessment in a Transboundary Context, 1991;
- WCMC, Global Biodiversity Status Report, p.446;
- ECE, Code of Practice...p.10/11;
- M. Chandler, The Biodiversity Convention...p.158.

Working Group 4: Access to Genetic Resources

The participants will be required to draft main elements for national legislation to regulate the access to genetic resources in accordance with Art. 15 of the Biodiversity Convention. The issue of access to genetic resources within the framework of the Biodiversity Convention is still very new and open, which will leave the group with a lot of discretion in designing the elements. If time permits, the Group may also wish to discuss rules to control the risk of release of living modified organisms (see Art. 8(g) of the Convention).

Materials:

- Art. 15, 8(g) of the Convention;
- S. Bragdon, National Sovereignty...esp.p.388;

Working Group 5: Access to and Transfer of Technology

The participants will be required to draft main elements of national legislation dealing with the access to, and transfer of, (bio) technology, with a special focus on intellectual property rights, thereby implementing Art. 16 of the Convention on Biodiversity. The issue of transfer of technology is still very open and contentious, which will leave the Group with lots of discretion in designing the elements.

Materials:

- Art. 16 of the Convention;
- WCMC, Global Biodiversity Status Report, p.495-499;
- M. Chandler, The Biodiversity Convention...esp.p.161;
- M. Gollin, Ch. VI and Annex 3 in: W.Reid, et al. Biodiversity prospecting, 1993,p.159-and 189.

BIODIVERSITY TRAINING PROGRAMME

Working Group 4: Access to Genetic Resources (Art. 15; 8(g), 19 para. 3)

The participants will be required to draft national legislation to regulate the access to genetic resources in accordance with Art. 15 of the Biodiversity Convention. This group will have to be even more creative than the others, as the issue of access to genetic resources within the framework of the Biodiversity Convention is still very new and open.

In addition, the group may discuss rules to control the risk of release of living modified organisms (see Art. 8(g), 19 para. 3 of the Convention).

Article 15. Access to Genetic Resources

1. Recognizing the sovereign rights of States over their natural resources, the authority to determine access to genetic resources rests with the national governments and is subject to national legislation.
2. Each contracting party shall endeavor to create conditions to facilitate access to genetic resources for environmentally sound uses by other contracting parties and not to impose restrictions that run counter to the objectives of this convention.
3. For the purpose of this Convention, the genetic resources being provided by a contracting party, as referred to in this Article and Articles 16 and 19, are only those that are provided by contracting parties that are countries of origin of such resources or by the parties that have acquired the genetic resources in accordance with this convention.
4. Access, where granted, shall be on mutually agreed terms and subject to the provisions of this Article.
5. Access to genetic resources shall be subject to prior informed consent of the contracting party providing such resources, unless otherwise determined by that party.

6. Each contracting party shall endeavor to develop and carry out scientific research based on genetic resources provided by other contracting parties with the full participation of, and where possible in, such contracting parties.

7. Each contracting party shall take legislative, administrative or policy measures, as appropriate, and in accordance with Article 16 and 19 and, where necessary, through the financial mechanism established by Article 20 and 21 with the aim of sharing in a fair and equitable way the results of research and development and the benefits arising from the commercial and other utilization of genetic resources with the contracting party providing such resources. Such sharing shall be upon mutually agreed terms.

Article 8(g)

Each contracting party shall, as far as possible and appropriate:

(g) Establish or maintain means to regulate, manage or control the risks associated with the use and release of living modified organisms resulting from biotechnology which are likely to have adverse environmental impacts that could affect the conservation and sustainable use of biological diversity, taking also into account the risks to human health.

Article 19 para. 3

3. The parties shall consider the need for, and modalities of, a protocol setting out appropriate procedures, including, in particular, advance informed agreement in the field of the safe transfer, handling and use of any living modified organisms resulting from biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity.

Notes for the resource person:

a) Political background

-See the third main objective of the Convention as outlined in Article 1: the fair and equitable sharing of biodiversity's benefits; the most controversial objective (which is not surprising if you look at the far-reaching consequences the new provisions are supposed to have on access to and transfer of genetic resources);

-"Sovereign rights" versus "open access;" "principle of national sovereignty" over genetic resources" versus "principle of common heritage to genetic resources;"

-Typical case: developing country, being "bio-rich," provides and exports genetic resources; developed country, being "bio-poor" but "technology-rich," uses and imports genetic resources.

b) Legal background

-Key issue of implementing Art. 15 in "providing" countries: development and enactment of a Prior Informed Consent (PIC) procedure, requiring that the potential purchaser of genetic resources applies for and be granted the authorization of the providing country, before the acquisition of any material takes place;

-See the problem of the Convention's wording in Art. 15 para. 5: "unless otherwise determined," a contracting party that does not wish to establish any PIC procedure for the access to genetic resources is supposed to formally decide so, because otherwise, after

ratification of the Convention, it will be obliged, according to public international law, to require PIC. By making the rule and the no-application of any PIC provision the exception, the drafters of the Convention wanted to ensure that PIC becomes some sort of a standard procedure for the appropriation risks of genetic resources. However, this paragraph risks creating a legal vacuum if there is neither a PIC procedure in place nor an official statement indicating that no PIC is required.

-Possible important steps in developing a PIC procedure in a providing country:

- : Determine and limit the genetic resources for which PIC will be required (e.g. limit to the most valuable genetic material);
 - : Require complete information; a potential user will be obliged to disclose which specific material he wants, in which quantities, what the genetic resources will be used for, and what potential implications the granting of access under the requested conditions will entail;
 - : Ask for reasonable compensation; lump sum, compensation based on royalties, compensation in kind (e.g. technical equipment) or a combination of these; special fee for investigating the access request;
 - : Formulate minimum requirement; see Art. 15 para. 6 and 7, but also the obligations under Article 15 para. 2 and 4; in addition, formulate the requirements for equitable arrangements with the local communities, wild land administrators, farmers, etc. (the custodians of the resources);
 - : Formulate future-oriented provisions; e.g. prevent the user country from competing with the same genetic material; determine that access will only be granted when both the present collection, the future use and the technology in return for the material, are environmentally sound;
 - : Create a special national authority; it would acquire all requests for access, be responsible for the whole process from demanding information up to the final granting or licensing of the access.
- See a problem of scope: can a providing country regulate access from private property sources within its territory? According to Art. 15, yes.

Materials:

- Art. 15; 8(g), 19 para. 3 of the Convention;
- W. Reid et al., *Biodiversity Prospecting*, 1993: Ch. I, A New Lease on Life, P.1-; Ch. IV, Contracts for Biodiversity Prospecting, p. 99-; Ch. V, Research Management Policies: Permits for collecting and Research in the Tropics, p.131-;

- Annex 2, Biodiversity Prospecting Contract, p. 225-(see library)
- S. Bragdon, National Sovereignty...esp.p.338-(copy in the file)
- F. Hendrickx/V Koester/C. Prip, Convention on Biological Diversity - Access to Genetic Resources: A legal Analysis, Environ. Policy & Law, 23/6 (1993), 250-, focus on "prior informed consent" (copy in the file).

BIODIVERSITY TRAINING PROGRAMME

Working Group 5: Access to and Transfer of Technology (Art. 16)

The participants will be required to draft elements of national legislation dealing with the access to, and transfer of, (bio) technology with a special focus on intellectual property rights thereby implementing Art. 16 of the Convention on Biodiversity. This issue is still a very open and contentious one, too.

Alternatively, it might be useful, and perhaps more realistic, to have a broad discussion on the issue of intellectual property rights in the light of Art. 15, 16 and 19 of the Convention only.

Article 16. Access to and Transfer of Technology

1. Each contracting party, recognizing that technology includes biotechnology, and that both access to and transfer of technology among contracting parties are essential elements for the attainment of the objectives of this Convention, undertakes, subject to the provisions of this Article, to provide and/or facilitate access for and transfer to other contracting parties of technologies that are relevant to the conservation and sustainable use of biological diversity or make use of genetic resources and do not cause significant damage to the environment.

2. Access to and transfer of technology referred to in paragraph 1 above to developing countries shall be provided and/or facilitated under fair and most favourable terms, including on concessional and preferential terms where mutually agreed, and, where necessary, in accordance with the financial mechanism established by Article 20 and 21. In the case of technology subject to patents and other intellectual property rights, such access and transfer shall be provided on terms which recognize and are consistent with the adequate and effective protection of intellectual property rights. The application of this paragraph shall be consistent with paragraphs 3, 4, and 5 below.

3. Each contracting party shall take legislative, administrative or policy measures, as appropriate, with the aim that contracting parties, in particular those that are developing countries which provide genetic resources, are provided access to and transfer of technology which makes use of those resources, on mutually agreed terms, including technology protected by patents and other intellectual property rights, where necessary, through the provisions of Articles 20 and 21 and in accordance with international law and consistent with paragraphs 4 and 5 below.

4. Each contracting party will take legislative or policy measures, as appropriate, with the aim that the private sector facilitates access to joint development and transfer of technology referred to in paragraph 1 above, for the benefit of both governmental institutions and the private sector of developing countries and, in this regard, shall abide by the obligations included in paragraphs 1, 2 and 3 above.

5. The contracting parties, recognizing that patents and other intellectual property rights may have an influence on the implementation of this Convention, shall cooperate in this regard subject to national legislation and international law in order to ensure that such rights are supportive of and do not run counter to its objectives.

Notes for the resource person:

-Broadly defined, biotechnology includes any technique that uses living organisms or parts of organisms to make or modify products, to improve plants or animals, or to develop micro-organisms for specific uses. (See also the definition of biotechnology in Art. 2 of the Convention).

-Intellectual Property Rights (IPRs) are rights to protect the application of thoughts, ideas and information which are of commercial value (see patents, copyrights, trademarks, trade secrets, plant breeders' rights and similar other rights).

-The basic argument in favour of applying IPRs to biodiversity conservation is the following: If those who control a habitat hold proprietary rights to develop its biological resources, they then have a means for obtaining economic benefits from those resources and, consequently, an incentive to conserve rather than destroy them. The main counter-argument is that a strong IPRs system - at least under the given political and economic circumstances - prevents the facilitated access to and transfer of technology and the equitable sharing of benefits, especially between "North" and "South".

-IPRs may be justified because they can:

- a) provide incentives to innovators;
- b) establish a system that promotes public disclosures of new information;
- c) reward people who create commercial or cultural value by the exercise of their intellectual and practical abilities;
- d) satisfy principles of moral rights by allowing creators to control the fate of their creations, and facilitate technology transfer.

-On the contrary, IPRs may:

- a) remove technology and information from the public domain;
- b) increase the cost of drugs and other important products;
- c) concentrate industry and agriculture on a few protected cultivated species or varieties;
- d) promote competition instead of cooperation;
- e) conflict with moral views on the proper extent of property rights in plants, animals and micro-organisms.

-A key issue each country should address is whether its current property laws, in particular IPRs are adequate to promote a sustainable biodiversity prospecting trade, or whether reform is necessary.

-Key parts of the Convention's text may be interpreted quite differently. See the following:

- : Art. 16 para. 5: "ensures that (IPRs) are supportive of and do not run counter to the Convention's objectives. Does it mean that IPRs shall not interfere with the transfer of technology and the sharing of benefits, or that the parties are obliged to cooperate in the further development of IPRs in order to ensure that...?;
- : Art. 16 para. 2 sentence 2; compare it with para. 5; see para. 2 sentence 3;
- : The inconsistent use of "mutually agreed terms;" Compare Art.15 para. 4 and 7, and Art. 19 para. 2 with Art. 16 para. 2. See again Art. 15 para 7: "in accordance with Art. 16." "Mutually agreed terms" in Art. 16 para. 2 seems to refer only to "concessional and preferential terms."

-Concerning Art. 16 of the Convention, see in particular: Gollin, W. Reid et al., Biodiversity Prospecting, p.295 (copy in the file).

Materials:

- Art. 16 of the Convention;
- WCMC, Global Biodiversity Status Report, p.495-499 (copy in the file)
- M. Chandler, The Biodiversity Convention...esp.p.161- (copy in the file)
- M. Gollin, Ch. VI and Annex 3 in: W. Reid et al., Biodiversity prospecting, 1993, p.159-and 289- (copy in the file).

B.3. BIBLIOGRAPHY OF SELECTED TRAINING MATERIAL: CONVENTION ON BIOLOGICAL DIVERSITY

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- B.3.2. UNEP, "Biological Diversity: Microbial resources and Biotechnology", in: UNEP Profile.
- B.3.3. UNEP, "Convention on Biological Diversity", June 1992.

Background Material Available on Request

- B.3.4. ECE, Code of Practice for the Conservation of Threatened Animals and Plants and Other Species of International Significance, New York, United Nations (ECE/ENVWA/25).
- B.3.5. National legislation (selected examples)
 - a) Zambia : The National Resources Conservation Act, 1970
 - b) Zambia : The National Parks and Wildlife Act, 1991
 - c) India : The Wildlife Protection Act, 1972
 - d) India : The National Conservation Strategy, 1992
 - e) Gambia : The Wildlife Conservation Act, 1977
 - f) Norway : The Nature Conservation Act, 1970
 - g) Norway : The Wildlife Act, 1981
 - h) Victoria, Austria : Flora and Fauna Guarantee Act, 1988
- B.3.6. WCMC (World Conservation Monitoring Centre), "Global Biodiversity: The status of the Earth's Living Resources", London, 1992.
- B.3.7. ARYAN, John C., "Conserving Biological Diversity", in BROWN, Lester R., and al., "State of the World 1992", p.9
- B.3.8. WRI/IUCN/UNEP, "Global Biodiversity Strategy: Guidelines for Action to Save, Study, and Use Earth's Biotic Wealth Sustainable and Equitably", Washington D.C., 1992.
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- B.3.10. LANG, J.T., "Biological Conservation and Biological Diversity" in: International Environmental Negotiation, G. Sjostedt, Newbury Park, 1993, p. 171.
- B.3.11. Biodiversity and International Law. The Effectiveness of International Environmental Law, S. Bilderbeek, Amsterdam, 1992.
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- B.3.13. CHANDLER, M. "The Biodiversity Convention: Selected Issues of Interest to the International Lawyer", Colorado Journal of International Environmental Law and Policy, Vol. 4, p.141.
- B.3.14. BRAGDON, S., "National Sovereignty and Global Environmental Responsibility: Can the Tension be reconciled for the conservation of Biological Diversity?", Harvard ILJ, Vol. 33,, 1992, p.381.

- B.3.15. Gollins, Michael A., "The Convention on Biological Diversity and Intellectual Property Rights", Biodiversity Prospecting, WRI, 1993, p.289.
- B.3.16. FISHMAN, R.L., "Biological Diversity and Environmental Protection: Authorities to Reduce Risk", Environmental Law, New York School of Law, vol.22, 1992, p.435.
- B.3.17. ROWLAND, M.J., "Bargaining for Live: Protecting Biodiversity through Mediated Agreement", *ibid.*, p.503
- B.3.18. JACKSON, P.B., "National Parks and Indigenous Peoples", Colorado Journal of International Environmental Law and Policy, vol. 4 1993, p. 502.
- B.3.19. DOREMUS, H., "Patching the Ark: Improving Legal protection of Biological Diversity," Ecological Law Quarterly, vol.18,1991, p.265.
- B.3.20. MEYERS, G.D. "Surveying the Law of the Land, Air and Water: Features of Current International Environmental and Natural Resources Law, and Future Prospects for the Protection of Species Habitat to Preserve Global Biological Diversity", Colorado Journal of International Environmental Law and Policy, vol. 1993, p.479.
- B.3.21. RACKLEFF, K., "Preservation of Biological Diversity: Toward a Global Convention", *ibid*, p. 405.
- B.3.22. UNEP/ROAP, Environmental Impact Assessment. Basic Procedures for Developing Countries, 1988.
- B.3.23. HENDRICKX, KOESTER, and PRIP, "Convention on Biological Diversity - Access to Genetic Resources: A Legal Analysis", Environmental Policy and Law, vol. 23, 1993, p.250.

**C.I. PRESENTATION OUTLINE:
VIENNA CONVENTION ON THE PROTECTION OF THE OZONE
LAYER AND MONTREAL PROTOCOL**

Legal Elements of the Vienna Convention and the
Montreal Protocol

Presented by:
Ms. L. Campbell
Deputy Coordinator
Ozone Secretariat, UNEP

C.1.1. Introduction

- a) Purposes of the Ozone Treaties
 - i) Vienna Convention - Cooperation in research on depletion of the ozone layer and its causes and effect.
 - ii) Montreal Protocol - To phase out the production and use of ozone depleting chemicals.
- b) Montreal Protocol on Substances that Deplete the Ozone Layer
 - i) Adopted 16 September 1987
 - ii) Countries which have ratified as of 31 October 1993
 - * Montreal Protocol: 127 countries
 - * London Amendment (1990): 69 countries
 - * Copenhagen Amendment (1992): 9 countries

C.1.2 Measures to Control Production and Consumption of Ozone Depleting Chemicals

- a) Articles 2A-2E, 2G and 2H of the Montreal Protocol
 - i) 2A: CFCs - phased out by 1 January 1986
 - ii) 2B: Halons - phased out by 1 January 1994
 - iii) 2C: Other fully halogenated CFCs (1986) - phased out by 1 January 1996
 - iv) 2D: Carbon tetrachloride (1989 base) - phased out by 1 January 1996
 - v) 2E: Methyl Chloroform (1989 base) - phased out by 1 January 1996
- b) Grace-period of 10 years for Developing countries operating under paragraph 1 of Article 5.

C.1.3. Control of Trade with non-Parties

- a) Production containing Ozone Depleting Chemicals

- b) Ozone Depleting Chemicals

C.1.4. Financial Mechanism for assisting Developing Countries Multilateral Fund.

- a) To provide financial assistance and technology transfer to phase out ODS in countries operating under paragraph 1 of Article 5.
- b) Budget 1994-1996 - \$510 million
- c) Country Programme/Projects

C.1.4. Financial Mechanism for assisting Developing Countries Multilateral Fund

- a) Implementing Agencies

- i) UNDP
- ii) UNEP
- iii) UNIDO
- iv) World Bank

C.1.5. Assessment and Review of Control Measures - Article 6

- a) Scientific, Environment and Technology and Economic Assessment Panels
- b) Technical Options Committees

C.1.6. Reporting of Data

- a) For Classification under Article 5, Paragraph 1
- b) Article 7 - On Production and Consumption of Controlled Substances.

**C.3. BIBLIOGRAPHY OF SELECTED TRAINING MATERIAL:
VIENNA CONVENTION ON THE PROTECTION OF THE OZONE LAYER AND
THE MONTREAL PROTOCOL**

- C.3.1 Vienna Convention for the Protection of the Ozone Layer, Vienna, 1985 (in UNEP, "Selected multilateral treaties in the field of the environment," Vol. 2, p. 301).
- C.3.2 Montreal Protocol on the Substances that Deplete the Ozone Layer, Montreal, 1987 (in: UNEP, "Selected multilateral treaties in the field of the environment," Vol. 2,p. 309).
- C.3.3 Adjustment to the Montreal Protocol on substances that deplete the ozone layer (1987), London 1990 (in: UNEP, "Selected multilateral treaties in the field of the environment, Vol. 2, p. 315).
- C.3.4 Amendment to the Montreal Protocol on substances that deplete the ozone layer (1987), 1990, London (in: UNEP, "Selected multilateral treaties in the field of the environment," Vol. 2, p.316).
- C.3.5 Adjustment to the Montreal Protocol on substances that deplete the ozone layer (1987), Copenhagen, 1992; amendment to the Montreal Protocol on substances that deplete the ozone layer (1987), Copenhagen, 1992.
- C.3.6 Report of the Third Meeting of the Conference of the Parties to the Vienna Convention for the protection of the ozone layer, Bangkok, 23 November 1993.
- C.3.7 Report of the Fifth Meeting of the conference of the parties to the Montreal Protocol on substances that deplete the ozone layer, Bangkok, 19 November 1993.
- C.3.8 UNEP, "Action on Ozone," September 1993.
- C.3.9 The multilateral fund, "For the Implementation of the Montreal Protocol."

**D.1. PRESENTATION OUTLINE:
BASEL CONVENTION ON THE CONTROL OF
TRANSBOUNDARY MOVEMENTS OF HAZARDOUS WASTES AND THEIR
DISPOSAL**

Presented by:
Mr. M. Nagai
Programme Officer
International Legal Instruments
Environmental Law and Institutions
Programme Activity Centre, UNEP

Negotiation Process, Main Principles of the Convention, Implementation and Enforcement,
including National Legislation and Capacity-Building

D.1.1. Background of the Decisions of the UNEP Governing Council leading to the development of Global Environmental Regulations in the field of environmentally sound management of hazardous wastes.

- a) Montevideo Programme for the development and periodic review of Environmental Law, 1981.
- b) Conclusion and adoption of the Cairo Guidelines on Environmentally-Sound Management of Hazardous Wastes and its Main Principles.
- c) Activities by governments and public participation leading to the adoption of the Governing Council Decision for the development of the Global Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal

D.1.2. Negotiation Process

- a) Actors in the negotiating process: governments, developing and developed countries, NGOs, industry, private sector.
- b) The role of the public awareness and the media in the negotiations.

D.1.2. Negotiation Process

- a) Polarization of two groups of countries during the negotiations and its impact on the signatories of the Convention in Basel in 1989.

D.1.3. The main provisions of the Basel Convention.

- a) Minimization of the generation of hazardous wastes
- b) Disposal as close as possible to the place of generation.
- c) Transboundary movements of hazardous wastes only allowed if the other ways of disposal of treatment are not possible and only if respecting the special conditions and requirements under which the transboundary movements of waste is allowed

- d) Development of technical guidelines on the environmentally sound management of hazardous wastes
 - * Waste disposal
 - * Waste streams
- e) Requirement on the development of provisions on liability and compensation for damages caused by transboundary movements of hazardous wastes and their disposal
- f) Emergency funds
- g) Technical assistance to developing countries
- h) Regional Technology Exchange Centres
- i) Enforcement of right of the countries to ban import of hazardous wastes into their territory
- j) Trade restrictions
- k) Rights and obligations of country of import, country of export and country of transit
- l) Notification and movement documents

D.1.4. Capacity-building under the Basel Convention

- a) Designation by every country of focal points and national competent authorities responsible for the implementation of the Basel Convention.
- b) Development of national legislation in the field of management of hazardous wastes.

D.1.5. Enforcement mechanisms - Revision of the implementation of the Convention and compliance with these provisions

D.1.6. Role of the Secretariat in the Implementation of the Convention

- a) * Development of Draft Model National Legislation
- b) Assistance in the case of development of regional agreements
- c) Collection and determination of information
- d) Providing technical assistance for developing countries and countries in transition to a market economy

D.1.7. Trade limitation within the Basel Convention and its implementation - Role of Bilateral, Multilateral and Regional Agreement included in accordance with Article 11 of the Convention

D.1.8. Agenda 21 and Management of Hazardous Wastes - Chapter 20 of the Agenda - specific subjects addressed to the Basel Convention

- a) Other subjects which have been partially covered by the provisions of the convention.

D.1.9. Co-operation between the Basel Convention and London Convention 1972

- a) Relation between the two Conventions
- b) Undergoing changes in the London Convention 1972 - need to ensure that the two Conventions are not only compatible but also complementary to each other.

D.1.10. The provisions of the Basel Convention and its relation to the nuclear wastes which are subject to regulations by IAEA

- a) Code of practice developed under IAEA in relation to nuclear waste and its compatibility with the Basel Convention
- b) Co-operation between UNEP, IMO and IAEA in relation to the transport of nuclear fuel by sea
- c) Definition of waste subject to the Basel Convention

D.1.11. Hazardous wastes and other wastes

D.1.12. Hospital wastes - radioactive aspects

D.1.13. Relation to the OECD decision on the waste subject to recovery operations - green, amber and red lists.

D.1.14. Global waste survey by IMO

D.1.15. The EEC Wastes Catalogue

D.1.16. Wastes and chemicals' similarities and differences

D.1.17. Regional approach to the definition of hazardous wastes - inclusion of nuclear wastes

D.1.18. African Bamako Convention on the ban on import of hazardous wastes into African territory

D.1.19. Other regional conventions in this field under negotiations, i.e. Mediterranean, Pacific, Caribbean and others

D.1.20. Highlights of the first meeting of the Contracting Parties to the Basel Convention

- a) Institutional and financial approaches (two funds)
- b) Development of a manual for the use of the Basel Convention
- c) Process of reviewing of bilateral, regional and multilateral agreement in accordance with Article 11 of the Basel Convention.

D.1.21. Problem of the ban on export of hazardous wastes to the developing countries

- a) Background of the problem
- b) Technical aspects

- c) Relations to the movement for recovery operations.

D.1.22. Illegal traffic in hazardous wastes

- a) General Assembly Resolution
- b) Governing Council Decisions
- c) Co-operation with regional commissions

D.1.23. National legislations and inclusion of the illegal traffic into the National Panel Codes as provided by the provisions of the Basel Convention

D.1.24. Decisions of the last (1993) Governing Council of UNEP related to hazardous wastes

- a) Problem of military sites and its cleaning - relation to the cleaning of other sites of disposal of hazardous wastes
- b) Strategy for the environmentally sound management of hazardous wastes and its implementation
- c) Problem of nuclear wastes and appropriate regulations

D.1.25. Liability and compensation - First of the Working Group

- a) Scope of the possible protocol
- b) Channelling of liability
- c) State responsibility
- d) Strict liability concept
- e) Compensation and emergency fund. If so, combined or separate?
- f) Emergency activities related to hazardous wastes within the United Nations and other international fora
- g) Factual basis related to the accidents of hazardous wastes and their disposal.

D.1.26. Importance of data base and proper data collection in the development of international agreement and their implementation

D.1.27. The role and competency of the Conference of the Contracting Parties and other subsidiary bodies of the Basel Convention and its relation with other international conventions (Customs Co-operation Council, EEC regulations, OAU activities, regional seas activities and others).

**SUMMARY OF PRESENTATION BY. M. NAGAI AT UNEP/UNITAR GLOBAL
ENVIRONMENT LAW SEMINAR
HELD IN NAIROBI IN DECEMBER 1993**

Most hazardous wastes come from industries that are among the most important to a modern industrial society, such as iron and steel, nonferrous or precious metals, and the chemical industry. Generation of hazardous wastes will continue to be one of the major consequences of industrial development.

In recent years, transboundary movements of hazardous wastes have increased, including movements among developed countries and between developed and developing countries. A number of instances of illegal traffic of such wastes to developing countries had caused international concern.

Institutionalized international co-operation was needed to address the growing amount of hazardous wastes generation, their transboundary movements and disposal. Based on this need, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal was concluded in March 1989. The Basel Convention entered into force on 5 May 1992.

The development of the Basel Convention goes back to the early 1980s. In the Montevideo Programme for the Development and Period Review of Environmental Law, adopted by the UNEP Governing Council in May 1982, hazardous wastes were identified as one of the major areas where global legal instruments had to be developed. After three sessions of a UNEP working group held between 1984-85, the Cairo Guidelines and Principles for Environmentally-Sound Management of Hazardous Wastes was adopted by the UNEP Governing Council in 1987. The Guidelines set out those principles addressing the transboundary movements of hazardous wastes and their disposal. A decision of the UNEP Governing Council in June 1987 led the international community to the negotiation for the development of a global convention on hazardous wastes that resulted in the Basel Convention.

The Basel Convention represents a first step in defining the global means to reduce and strictly control the movement of hazardous wastes and to ensure that such wastes are disposed of in an environmentally-sound manner. It provides for realistic measures to strengthen the protection of the global environment from the possible harmful effects of hazardous wastes in transboundary movements, including the obligation to reduce the generation of hazardous wastes to a minimum; each country's sovereign right to ban the import of hazardous wastes; prohibition of exports to, and imports from, non-parties unless subject to a bilateral, multilateral or regional agreement whose provisions are no less stringent than those of the Basel Convention; disposal of hazardous wastes as close as possible to their source of generation unless their transboundary movements represent the most environmentally-sound solution. Prior informed consent by the importing country is required for shipments of hazardous wastes. Transboundary movements of hazardous wastes carried out in contravention of the provisions of the Basel Convention are considered to be illegal traffic, criminal acts. The Convention calls for international cooperation between parties in areas related to environmentally-sound waste management.

Work is being carried out to ensure the effective implementation of the Basel Convention. A working group has been considering modalities for the development of a protocol to the Basel Convention concerning liability and compensation. Mechanisms for the effective implementation of the Convention are subject of consideration by another working group. Technical guidelines for the environmentally-sound management of hazardous wastes have been drafted with a view to assisting countries to implement the provisions of the Basel Convention.

**D.3. BIBLIOGRAPHY OF SELECTED TRAINING MATERIAL:
BASEL CONVENTION ON THE CONTROL OF TRANSBOUNDARY MOVEMENTS OF
HAZARDOUS WASTES AND THEIR DISPOSAL**

- D.3.1. "Report of the First Meeting of the conference of the parties to the Basel Convention", UNEP/CHW.1/24, 5 December 1992.
- D.3.2. "Report of the technical working group to prepare draft technical guidelines for the environmentally sound management of hazardous wastes subject to the Basel Convention," UNEP/CHW/WG.4/4/6, 4 June 1993.
- D.3.3. "Note of technical working group of the Basel Convention on the classification of the ozone depleting substances as hazardous wastes in accordance with the Basel Convention definition", UNEP/CHW/WG.4/4/6.
- D.3.4. "Note of the secretariat on state liability as a possible element of a comprehensive regime of liability and compensation for damage resulting from the transboundary movements of hazardous wastes and their disposal," UNEP/CHW.1/1/3.
- D.3.5. "Report on the factual basis received from the parties to the Basel Convention on the subject of liability and compensation for damage resulting from the transboundary movements of hazardous wastes and their disposal," UNEP/CHW.1/1/2.
- D.3.6. Report of the secretariat on the implementation of decision 1/14 entitled "Emergency Fund".
- D.3.7. "Report of the meeting of experts on Model National Legislation on the management of hazardous wastes in accordance with the Basel Convention on the control of transboundary movements of hazardous wastes and their disposal, Geneva, 6-8 May 1992", UNEP/CHW.1/10, 25 August 1992.
- D.3.8. The Basel Convention: A Global Approach for the management of hazardous wastes by Dr. I. Rummel-Bulska.

E.1.4. Other international agreements which include trade related provisions for chemicals substances based on health or environmental concerns.

- a) FAO International Code of Conduct
- b) ILO 1990 Convention on the Safety of Chemicals at the Work Place
- c) The Montreal Protocol on substances that deplete the ozone layer
- d) 1971 Convention on Psychotropic Substances
- e) Convention Against the Illicit Traffic in Narcotic Drugs and Substances
- f) GATT draft decision on products banned or severely restricted in the domestic market
- g) WHO certification scheme for pharmaceutical — (?)

E.1.5. Operation of the Prior Informed Consent Scheme through the FAO/UNEP joint programme on PIC

E.1.6. Legislative aspects of implementing the London Guidelines at the national level

E.1.7. Capacity-building and technical assistance under the London Guidelines

PART 1

E.2. EXERCISE: CHEMICALS IN INTERNATIONAL TRADE

Possible Elements of National Legislation Related to the Implementation of the London Guidelines

Guidance Questions

- * Legal status and function of the Designated National Authority?
- * Establishment of an inter-agency committee responsible for chemicals management, including implementation of London Guidelines?
- * Legal authority of DNA to collect information from various parties relevant in the process of making PIC import decisions?
- * Legal status of PIC import decisions? (e.g. incorporation of PIC import decisions into customs ordinances or national trade permit system)
- * Legal provisions for placing responsibility on the importer for ensuring that import and marketing does not take place contrary to the PIC decision you have made?
- * Administrative or legal fines or penalties for the illegal importation of a chemical in violation of an import decision?
- * Regulation of the remaining uses of imported severely restricted pesticides? (e.g. end user certificates, labelling requirements, etc.)
- * Conformity of national legislation with other relevant international agreements?

E.3. BIBLIOGRAPHY OF SELECTED TRAINING MATERIAL: CHEMICALS IN INTERNATIONAL TRADE

- E.3.1. UNEP, "London Guidelines for the exchange of information on chemicals in international trade," Amended 1989, Nairobi 1989.
- E.3.2. FAO, "International Code of Conduct on the distribution and use of pesticides" (Amended Version), Rome, 1990.
- E.3.3. ILO, "Convention No. 170 Concerning safety in the use of chemicals at work," Geneva 1990.
- E.3.4. "Guidance on chemical management legislation: Overview", Revised draft, UNEP/PIC/WG.1/3/2 (as of January 1993)
- E.3.5. FAO, "Guidelines for legislation on the control of pesticides", Rome, January 1989.
- E.3.6. Development of the National implementation strategy for PIC, Training Material to assist countries to assess their capacity to implement PIC, UNEP/UNITAR sub-regional workshop, Kuala Lumpur, December 1991.
- E.3.7. Progress report on the FAO/UNEP joint programme on the operation of PIC (latest version).

F.1. PRESENTATION OUTLINE (PART 1)

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA

Presented by:
Mona Bjorklund
Senior Programme Officer
Wildlife and Protected Areas Unit
Environmental Management

What is CITES

- * CITES is the acronym for the Convention on International Trade in Endangered Species of Wild Fauna and Flora
- * It is a conservation treaty concerned with trade.

Why CITES?

- * I refer you to the preamble of the CITES Convention which captures the essence of the need for the Convention when it speaks of:
 - wild fauna and flora in their many beautiful and varied forms as an irreplaceable part of the natural systems of the earth which must be protected for this and the generations to come;
 - the ever-growing value of wild fauna and flora from aesthetic, scientific, cultural, recreational and economic points of view;
 - the people and states as the best protectors of their own wild fauna and flora;
 - international cooperation as being essential for the protection of certain species of wild fauna and flora against over-exploitation through international trade;
 - and last but not least, the urgency of taking appropriate measures to this end.
- * As stated in the preamble, the reason for CITES is that there are problems with the high exploitation levels and volumes of international trade in wild fauna and flora leading to a level of utilization which is incompatible with their survival.
- * Commercial trade can be a threat to the survival of wild flora and fauna, and the more endangered a species is, the more restricted trade should be.
- * The last, eighth, Conference of the Parties, which met in Kyoto, Japan, in March 1993, recognized, however, that commercial trade may be beneficial to the conservation of species and ecosystems and/or to the development of local people when carried out at levels that are not detrimental to the survival of the species in question.

- * Finally, CITES is needed also because international cooperation is necessary to control the illegal trade in endangered species of wild fauna and flora.

What are the immediate threats to wildlife species?

- * The destruction of natural habitats such as tropical forests, wetlands and coral reefs is the most important cause.
- * For instance, coral reefs are being blown apart by explosives to make fishing easier.
- * However, the capture and slaughter of animals and the gathering of wild fauna and flora for commercial purposes are the second major cause of the extinction of species from our planet.
- * Such trade, as is being prohibited or regulated by CITES could, if unchecked, result in the total extinction of some species.

Is this trade profitable?

- * It is estimated that the annual trade in wild animals, whether alive or dead, in wild plants and in the by-products of both, is worth more than US\$ 5 billion in turnover, excluding fisheries and timber.
- * So there is a considerable profit involved.

History of CITES

- * CITES was opened for signature on 3 March 1973, 20 years ago, when 21 countries signed it.
- * It was the first international treaty to use the levers in the interests of wildlife conservation.
- * The Convention entered into force on 1 July 1975 after the tenth ratification.
- * Five States became new members of CITES during 1993, bring the total number of parties to CITES to 120 on 30 November 1993.
- * At the end of 1975, when the CITES entered into force, only four of Africa's 50-plus States were parties to CITES. In Asia, there were just two members.
- * Today, however, the majority of the CITES membership is from developing countries.
- * UNEP provides the secretariat for the CITES Convention which coordinates the actions of the States that have signed the Convention prohibiting or regulating commercial trade in some 30,000 endangered wild animals and plant species threatened with extinction.
- * The species covered range from big mammals to less glamorous ones, but which are just as important.

General structure of CITES

- * Article 1 of the Convention deals with definitions.

The following important terms are defined: "species," "specimen," "trade," "re-export," "introduction from the sea," "scientific authority," "management authority," and "party."

What does CITES do?

- * CITES has set up a world-wide network for the control of international trade in endangered wild flora and fauna and their products by establishing the compulsory use of official permits for such trade.
- * This often involves the use of security paper and stamps in an attempt to avoid misuse and forgery.
- * Article II covers the fundamental principles under the Convention.
- * There are 3 Appendices (I, II, and III) under the Convention.
- * The parties to the Convention shall not allow trade in specimens of species included in Appendices I, II, and III, except in accordance with the provisions of the present Convention.
- * The regulations of trade in specimens of species included in Appendix I, II and III are outlined in Articles III, IV and V.
- * Appendix I includes all species threatened with extinction which are, or maybe, affected by trade.
- * International trade is prohibited for Appendix I species.
 - Export and import permits are necessary for transport from one country to another if trade is not for commercial purposes.
- * Appendix II includes all species which may not now be threatened with extinction but may become threatened unless trade in specimens of such species is subject to strict regulation.
- * International trade is controlled for Appendix II species.
 - Export permits are necessary.
 - Trade in Appendix II specimens is allowed only if it is proven that it is not detrimental to the survival of the species.
 - A scientific authority should monitor both the export permits granted and the actual export.
- * Appendix III includes species for which international trade is restricted in certain countries.
 - Export permits or certificates of origin are necessary.

Main Thrust of the CITES Secretariat Work

- * As decided by the eighth meeting of the Conference of the Parties to CITES (March 1993, Kyoto, Japan), the present most important task for the UNEP/CITES Secretariat is the preparation of new criteria for amendment of CITES Appendices I and II.
- * The reason for this revision of the criteria for amending the CITES appendices is that the criteria as adopted at the first meeting of the Conference of the Parties (Berne, Switzerland 1976) did not provide an adequate basis for amending the appendices.
- * The Conference of the Parties have found that many species are not appropriately listed in the current appendices and that there was a failure in some mechanisms for listing or transfer between appendices.
- * The parties to the CITES Convention have therefore agreed that they needed more appropriate criteria.
- * Another major exercise which is being undertaken by the UNEP/CITES Secretariat is to revise all existing resolutions and other decisions of the Conference of the Parties in order to eliminate duplication, repeal the defunct ones, make the rest easier to understand, easier to refer to and consequently easier to implement.
- * As you will have noticed, the text of the Convention covers only six pages.
- * However, the Eighth Conferences of the Parties so far held have adopted numerous resolutions which further interpret and elaborate upon the provisions of the different articles under the Convention.
- * Some of these resolutions replace or amend earlier resolutions adopted.
- * This makes the Convention a very complex and highly technical one, indeed.
- * Another cardinal problem is the Significant Trade Study.
- * During 1993, the relevant CITES Committees have discussed trade in more than 100 species and the UNEP/CITES Secretariat is following closely the implementation of the recommendations on these species made to the parties.
- * In order to assist in the development of national legislation for the implementation of CITES, the UNEP/CITES Secretariat, with the help of IUCN/ELC and TRAFFIC USA, started in late 1992, and now is completing analyses of national CITES legislation for 84 parties.
- * Unfortunately, less than 15% of the parties currently have adequate legislation for implementing the Convention.
- * Another main task of the UNEP/CITES Secretariat continue to be the training of CITES management and scientific authorities staff, customs and police officers, air carrier, etc.
- * Since the last conference of the parties in March 1993, 16 CITES regional or national seminars have been organized in Italy, Thailand, Trinidad and Tobago, Paraguay, Spain, Belgium, Argentina, Malawi, Senegal, South Africa, Japan, Mexico and the Russian Federation.

- * Under the expanded public awareness programmes, the UNEP/CITES Secretariat initiated the issue of UN stamps with CITES species (12 per year).
- * The first three blocks were printed for 3 March 1993 - the 20th Anniversary of CITES.
- * The UNEP/CITES Secretariat also developed a big jigsaw puzzle with 23 parrots from CITES Appendix I.
- * The colour-illustrated reference book "The Birds of CITES" has been published in November 1993.
- * Copies of "Guidelines for legislation to implement CITES" have already been distributed to you.
- * This is an important reference for any CITES party faced with enacting legislation for the adequate implementation of CITES.
- * Finally, I would like to appeal to all of you, when you return home, to urge your governments to maintain their support for the CITES Convention and other relevant international agreements on the environment.
- * Those States that have not done so should adhere to and implement them.
- * All parties should enact domestic legislation and commit resources to carry out their obligations under each accord.
- * Assistance should be made available to help lower-income countries with the important work of the implementation of the CITES Convention.

F.1. PRESENTATION OUTLINE (PART 1)
CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES (CITES)

Presented by:
Ms. Mona Bjorklund
Senior Programme Officer
Environmental Management/TEB, UNEP

F.1.1. Brief history

- What is CITES

- * A Convention on international trade of endangered species of wildlife
- * A Convention treaty with regard to trade (see preamble)

- Why CITES

- * Exploitation of wildlife is the second major cause for extinction of species
- * International co-operation is necessary
- * Large sums of money are involved (turnover about \$5 billion US excluding fisheries and timber)
- * Considerable profit

- Brief review of preamble of CITES

RECOGNIZING that wild fauna and flora in their many beautiful and varied forms are an irreplaceable part of the natural systems of the earth which must be protected for this and the generations to come

CONSCIOUS of the ever-growing value of wild fauna and flora from aesthetic, scientific, cultural, recreational and economic points of view;

RECOGNIZING that the peoples and states are and should be the best protectors of their own wild fauna and flora;

RECOGNIZING, in addition, that international cooperation is essential for the protection of certain species of wild fauna and flora against over-exploitation through international trade;

CONVINCED of the urgency of taking appropriate measures to this end;

F.1.2. General structures of CITES

- Brief review of general structure of CITES
- Definitions: the following important terms are defined: "species," "specimen," "trade," "re-export," "introduction from the sea," "scientific authority," "management authority," and "party."
 - * A specimen is:
 - an animal or a plant, alive or dead;
 - any readily recognizable part or derivative of plants or animals (for Appendix II plants, some parts or derivatives may be excluded).
 - * A species is:
 - any species;
 - any subspecies;
 - any geographically separate population.
- 3 Appendices (I, II, and III) (article II)
 - Appendix I - international trade prohibited
 - import and export permits are necessary for transport from one country to another if trade is not for commercial purposes
 - Appendix II - international trade controlled
 - export permits are necessary
 - Appendix III - international trade restricted in certain countries
 - export permits or certificates of origin are necessary;
 - exceptions - derogations (a document is necessary)
 - pre-convention specimens;
 - personal or household effects (under strict control);
 - animals bred in captivity;
 - artificially propagated plants;
 - loans and exchanges of specimen between recognized scientific institutions;
 - travelling zoos, circuses and exhibitions.
- Article IV.3
 - Trade in Appendix II specimens is allowed only if proven that it is not detrimental to the survival of the species. A scientific authority should monitor both the export permits granted and the actual export;

- Reservations

- Reservations are only possible to make for the species listed and only at certain times (accession, listing of the species, etc.) When a country makes a reservation, it is not considered as a party for this species (although resolutions have since limited the effects);

- Stricter measures

- any State can take stricter measures (e.g. USA and EEC countries).

**F.1. PRESENTATION OUTLINE (PART 2):
CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES (CITES)**

Presented by:
Mr. A. Timoshenko
Chief, International legal Instruments
Environmental Law and Institutions
Programme Activity Centre, UNEP

F.1.1. Implementation of CITES

-Four main steps:

1. Accede to the Convention
2. Adopt the proper national legislation
3. Training
4. Education - information

- The importance of national legislation: the Convention makes it mandatory to take the following minimal measures:

1. To penalize trade and possession of illegal specimens;
2. To confiscate or return to the state of export the illegal specimens;
3. To obtain reimbursement for expenses incurred in case of confiscation;
4. To designate one or more management authorities and to designate one or more scientific authorities.

- But national legislation also needs to deal with:

- internal trade;
- transit (Resolution Conf. 7.4);
- controls (officers-in-charge, procedures, control of breeding operations, nurseries, etc.);
- efficiency of national administration: Management Authority, Scientific Authority, Customs, Police;

- Enforcement and penalties:

- enforcement agencies and officers (power, seizure);
- offenses;
- penalties;
- return of unconfiscated live specimens to the state of export;
- disposal of confiscated specimens.

F.1.2. Institutional Structure

The Secretariat

- In case of infractions, the secretariat may take action
- Trust Fund for CITES
- Conference of the Parties
- Standing Committee
- Other Committees
 - Animals Committee
 - The Plants Committee
 - The Identification Manual Committee
 - The Nomenclature Committee
- Importance of the Resolutions of the Conference of the Parties
- Participation of observers (non- parties, intergovernmental organizations, international and national non-governmental organizations)

F.1.3. Conclusion: This treaty is an important contribution in conserving the biodiversity of the world.

CITES TRAINING PROGRAMME

F.2.1. WORKING GROUP 2

Working Group 1

Definition; determination of endangered and threatened species; transactions (see Art. I and II)

This working group's objective is to identify and draft elements for national legislation to implement CITES. The emphasis of this working group will be on the definitions and determination of what are endangered and threatened species (Art. I and II of the Convention).

It should be remembered that CITES implementation legislation should be enacted as soon as possible by all parties to the Convention. This should be effected by means of an Act of Parliament or equivalent instrument providing for essential requirements which should be supplemented by detailed regulations.

General consideration

At least three techniques can be used for the enactment of basic legislation essential for the implementation of CITES:

- a) A provision may be inserted into the Wildlife Act prohibiting the import, export and, preferably also, the possession of and domestic trade in all wild species, or in any species listed by regulations, except under a permit.

All other matters may then be left to regulations. This technique is used, for instance, by Indonesia where the export of any wildlife is subject to an export permit.

- b) The CITES ratification Act or any other relevant Act such as the Wildlife Act, may contain basic provisions prohibiting any action in contravention of the convention provisions in relation to any of the species listed in the convention appendices. This method has been used, for instance, by Belgium, in its CITES Ratification Act, and by Switzerland, through a provision of its Animal Welfare Act of 1978.

This latter Act empowers the Swiss federal Government to prohibit or otherwise regulate the import, export and transit of any wild animal species and lays down special penalties for violations of the Convention provisions. All other matters are dealt with by regulations. It is also possible to use legislation regulating foreign trade when such legislation empowers the government to control the import and export of any kind of goods. In such cases, regulations made under the main Act for the specific purpose of implementing CITES may be all that is needed. This method is used by Zimbabwe where very comprehensive regulations were made under the Control of Goods Act.

- c) The third possible technique consists in enacting a separate Act dealing exclusively with international trade in wild species. This is what has been done, for instance, by Australia and Singapore.

Any of these techniques may be adequate to implement CITES effectively, provided the basic Act contains a certain number of essential provisions prohibiting the import or export of specimens in contravention of the Convention, controlling domestic trade CITES specimens, designating enforcement officers and specifying their powers, establishing appropriate penalties and empowering the Government or a designated authority to make regulations for the implementation of the Act.

It would seem, however, that to give CITES a better visibility and publicity, and because of the many aspects which are specific to international trade in wild fauna and flora, it would be better, whenever possible, to implement the Convention through a separate piece of legislation.

The proposals that follow, therefore, relate to the drafting of a separate Act and regulation addressing specifically the implementation of CITES.

Definition; determination of endangered species and threatened species; transactions (Art. I and II)

Article 1

Definitions

For the purpose of the present Convention, unless the context otherwise requires:

- a) "species" mean any species, sub-species, or geographically separate population thereof;
- b) "specimen " means:
 - i) any animal or plant, whether alive or dead;
 - ii) in the case of an animal: for species included in Appendices I and II, any readily recognizable part or derivative thereof; and for species included in Appendix III, any readily recognizable part or derivative thereof specified in Appendix III in relation to the species; and
 - iii) in the case of a plant: for species included in Appendix, any readily recognizable part or derivative thereof, and for species included in Appendices II and III, any readily recognizable part or derivative thereof specified in Appendices II and III in relation to the species.
- c) "trade" means export, re-export, import and introduction from the sea;
- d) "re-export" means export of any specimen that has previously been imported;
- e) "introduction from the sea" means transportation into a state of specimens of any species which were taken in the marine environment not under the jurisdiction of any State;
- f) "scientific authority" means a national authority designated in accordance with Article IX;
- g) "management authority" means a national management authority designated in accordance with Article IX;
- h) "Party" means a State for which the present convention has entered into force.

Article II

Fundamental principles

1. Appendix I shall include all species threatened with extinction which are or may be affected by trade. Trade in specimens of these species must be subject to particularly strict regulation in order not to endanger further their survival and must only be authorized in exceptional circumstances.
2. Appendix II shall include:
 - a) all species which, although not necessarily now threatened with extinction, may become so unless trade in specimens of such species is subject to strict regulation in order to avoid utilization incompatible with their survival; and
 - b) other species which must be subject to regulation in order that trade in specimen of certain species referred to in subparagraph (a) of this paragraph may be brought under effective control.
3. Appendix III shall include all species which any party identifies as being subject to regulation within its jurisdiction for the purpose of preventing or restricting exploitation, and as needing the cooperation of other parties in the control of trade.
4. The parties shall not allow trade specimens of species included in Appendices I, II, and III except in accordance with the provisions of the present Convention.

When drafting legislation to implement CITES, the following should be taken into account:

Species

- any species
 - any subspecies
 - any geographically separate population.
- a) The Act must apply to all animal and plant species listed in all three CITES appendices (except for species on which party concerned has entered a reservation).
 - b) For that purpose, the Act may merely refer to the Convention appendices themselves. In such a case, it should specify that it becomes automatically applicable to any amendment to the Convention appendices as soon as the amendment has come into force. The Act should also require that all amendments to the Convention appendices be published in Official Gazette together with the date of their entry into force.
 - c) Alternatively, the list of CITES species may be contained in a schedule or annex to the Act or in separate regulations. In such a case, separate lists should be made to correspond to each CITES appendix.
 - i) Whether in a schedule to the Act or in separate regulations, the lists should be capable of being amended by regulations.
 - ii) The Act should make it an obligation for the competent authority, as soon as an amendment to the CITES appendices has been adopted by the

conference of the parties, to make corresponding amendments to the schedules or annexes to the Act or to the list of species contained in the regulations, as the case may be.

- iii) Appendix I species on which the party concerned has entered a reservation should be listed in the schedule or regulations as if they were listed in CITES Appendix II.
- iv) The scientific nomenclature used to list species names should be the same as in the CITES listings. The list in the schedules or regulations should be amended accordingly.
- v) The Act should empower the competent authority to list any CITES Appendix II and III species in that part of the schedule or regulation corresponding to CITES Appendix I and to list CITES Appendix III species in that part of the schedule or regulation corresponding to Appendix II.

Specimens

- an animal or a plant, alive or dead
- any readily recognizable part or derivative of plants or animals (for appendix II plants, some parts or derivatives may be excluded).

- a) The Act should contain a definition of the term "specimen" which should include live and dead animals and plants and any readily recognizable parts or derivatives thereof.
- b) The regulations should expand upon this definition to specify, according to Resolution Conf. 5.9, that such parts or derivatives include all specimens which appear from an accompanying document, the packaging or a mark or label, or from any other circumstances to be part or derivatives of animals or plants of species listed in the CITES appendices, unless they are specifically exempted. These exemptions should be listed. In addition, the regulations could list certain specific parts or derivatives which are commonly traded, provided it is made clear that the list is not exhaustive.

Transactions

- a) The Act should define export, re-export and introduction from the sea in the same terms as the Convention.
- b) Import should be defined as the introduction of a specimen into the national territory under any customs procedure other than transit and trans-shipment.
- c) Transit and trans-shipment should be defined according to Resolution Conf. 4.10, as those situations in which a specimen is in the process of shipment to a named consignee in another country and that any interruption in the movement arise only from the arrangements necessitated by that form of traffic. Transit should be understood as including those cases where the specimens remain at all times in the aircraft, ship or other means of transport in which they were brought in.

CITES TRAINING PROGRAMME

F.2.2. WORKING GROUP 2

Working Group II

Controlling trade; import/export formalities, ports of exit and entry (see art. III-IV, VIII(3))

This working group's objective is to identify and draft elements for national legislation to implement CITES. The emphasis of this working group will be on controlling trade through import/export formalities, ports of exit and entry (Art. III-IV, VIII(3) of the Convention).

It should be remembered that CITES implementation legislation should be enacted as soon as possible by all parties to the Convention. This should be effected by means of an Act of Parliament or equivalent instrument providing for essential requirements which should be supplemented by detailed regulations.

General consideration

At least three techniques can be used for the enactment of basic legislation essential for the implementation of CITES:

- a) A provision may be inserted into the Wildlife Act prohibiting the import, export and, preferably also, the possession of, and domestic trade, in all wild species, or in any species listed by regulations, except under a permit.

All other matters may then be left to regulations. This technique is used, for instance, by Indonesia where the export of any wildlife is subject to an export permit.

- b) The CITES Ratification Act or any other relevant Act such as the Wildlife Act, may contain basic provisions prohibiting any action in contravention of the Convention provisions in relation to any of the species listed in the Convention appendices. This method has been used, for instance, by Belgium, in its CITES Ratification Act, and by Switzerland, through a provision of its Animal Welfare Act of 1978.

This latter Act empowers the Swiss federal Government to prohibit or otherwise regulate the import, export and transit of any wild animal species and lays down special penalties for violations of the Convention provisions. All other matters are dealt with by regulations. It is also possible to use legislation regulating foreign trade when such legislation empowers the government to control the import and export of any kind of goods. In such cases, regulations made under the main Act for the specific purpose of implementing CITES may be all that is needed. This method is used by Zimbabwe where very comprehensive regulations were made under the Control Goods Act.

- c) The third possible technique consists in enacting a separate Act dealing exclusively with international trade in wild species. This is what has been done, for instance, by Australia and Singapore.

Any of these techniques may be adequate to implement CITES effectively, provided the basic Act contains number of essential provisions prohibiting the import or export of specimens in contravention of the Convention, controlling domestic trade CITES specimens, designating enforcement officers and specifying their powers, establishing appropriate penalties and empowering the Government or a designated authority to make regulations for the implementation of the Act.

It would seem, however, that to give CITES a better visibility and publicity, and because of the many aspects which are specific to international trade in wild fauna and flora, it would be better, whenever possible, to implement the Convention through a separate piece of legislation.

The proposals that follow therefore relate to the drafting of a separate Act and regulation addressing specifically the implementation of CITES.

Controlling trade: import/export formalities, ports of exit and entry (art. III-IV, VIII(3))

ARTICLE III

**Regulation of trade in specimen of species
included in Appendix I**

1. All trade in specimens of species included in Appendix I shall be in accordance with the provision of this article.
2. The export of any specimen of a species included in Appendix I shall require the prior grant and presentation of an export permit. An export permit shall only be granted when the following conditions have been met:
 - a) A scientific authority the state of export has advised that such export will not be detrimental to the survival of that species.
 - b) A management authority of the state of export is satisfied that the specimen was not obtained in contravention of the laws of that state for the protection of fauna and flora;
 - c) A management authority of the state of export is satisfied that any living specimen will be so prepared and shipped as to minimize the risk of injury, damage to health or cruel treatment: and
 - d) A management authority of the state of export is satisfied that an import permit has been granted for the specimen.
3. The importance of any specimen of a species included in Appendix I shall require the prior grant and presentation of an import permit and either an export permit or a re-export certificate. An import permit shall only be granted when the following conditions have been met:
 - a) A scientific authority of the state of import has advised that the import will be for purposes which are not detrimental to the survival of the species involved;
 - b) [Either a management authority or] a scientific authority of the state of import is satisfied that the proposed recipient of a living specimen is suitably equipped to house and care for it; and

- c) A management authority of the state of import is satisfied that the specimen is not to be used for primary commercial purposes.

4. The re-export of any specimen of a species included in Appendix I shall require the prior grant and presentation of a re-export certificate. A re-export certificate shall only be granted when the following conditions have been met:

- a) A management authority of the state of re-export is satisfied that the specimen was imported into that state in accordance with the provisions of the present Convention;
- b) A management authority of the state of re-export is satisfied that any living specimen will be so prepared and shipped as to minimize the risk of injury, damage to health or cruel treatment; and
- c) A management authority of the state of re-export is satisfied that an import permit has been granted for any living specimen.

5. The introduction from the sea of a specimen of a species included in Appendix I shall require the prior grant of a certificate from a management authority of the state of introduction. A certificate shall only be granted when the following conditions have been met:

- a) A scientific authority of the state of introduction advises that the introduction will not be detrimental to the survival of the species involved;
- b) A management authority (or scientific authority) of the state of introduction is satisfied that the proposed recipient of a living specimen is suitably equipped to house and care for it; and
- c) A management authority of the state of introduction is satisfied that the specimen is not to be used for primary commercial purposes.

ARTICLE IV

Regulation of trade in specimens of species included in Appendix II

1. All trade in specimens of species included in Appendix II shall be in accordance with the provisions of this Article.

2. The export of any specimen of a species included in Appendix II shall require the prior grant and presentation of an export permit. An export permit shall only be granted when the following conditions have been met:

- a) A scientific authority of the state of export has advised that such export will not be detrimental to the survival of that species.
- b) A management authority of the state of export is satisfied that the specimen was not obtained in contravention of the laws of that state for the protection of fauna and flora; and

- c) A management authority of the state of export is satisfied that any living specimen will be so prepared and shipped as to minimize the risk of injury, damage to health or cruel treatment;

3. A scientific authority in each party shall monitor both the export permits granted by that state for specimens of species included in Appendix II and the actual exports of such specimens. Whenever a scientific authority determines that the export of specimens of any such species should be limited in order to maintain that species throughout its range at a level consistent with its role in the ecosystems in which it occurs and well above the level at which that species might become eligible for inclusion in Appendix I, the scientific authority shall advise the appropriate management authority of suitable measures to be taken to limit the grant of export permits for specimens of that species.

4. The import of any specimen of a species included in Appendix II shall require the prior grant and presentation of either an export permit or a re-export certificate.

5. The re-export of any specimen of a species included in Appendix II shall require the prior grant and presentation of a re-export certificate. A re-export certificate shall only be granted when the following conditions have been met:

- a) A management authority of the state of re-export is satisfied that the specimen was imported into that state in accordance with the provisions of the present Convention; and
- b) A management authority of the state of re-export is satisfied that any living specimen will be so prepared and shipped as to minimize the risk of injury, damage to health or cruel treatment.

6. The introduction from the sea of any specimen of a species included in Appendix II shall require the prior grant of a certificate from a management authority of the state of introduction. A certificate shall only be granted when the following conditions have been met:

- a) A scientific authority of the state of introduction advises that the introduction will not be detrimental to the survival of the species involved; and
- b) A management authority of the state of introduction is satisfied that any living specimen will be so handled as to minimize the risk of injury, damage to health or cruel treatment.

7. Certificates referred to in paragraph 6 of this Article may be granted on the advice of a scientific authority, in consultation with other national scientific authorities or, when appropriate, international scientific authorities, in respect of periods not exceeding one year for total numbers of specimens to be introduced in such period.

ARTICLE VIII

Measures to be taken by the Parties

[...]

3. As far as possible, the parties shall ensure that specimens shall pass through any formalities required for the trade with a minimum of delay. To facilitate such passage, a party may designate ports of exit and ports of entry at which specimens must be for clearance. The parties shall ensure further that all living specimens, during any period of transit, holding or shipment, are properly cared for so as to minimize the risk of injury, damage to health or cruel treatment.

When drafting legislation to implement CITES, the following should be taken into account:

Import/export formalities

At a minimum, the conditions required for the issuing of permits should be those laid down by the convention. The Act should establish a prohibition to import, introduce from the sea, export or re-export any specimen of a listed species otherwise than under a valid permit, issued in conformity with the conditions laid down in Article III, IV and V of CITES.

Of particular importance are a number of requirements which are often omitted from national implementation legislation, such as the need for at the Management Authority (of the state of export of an Appendix I specimen) to be satisfied that an import permit has been granted before it issues an export permit, and the obligation for that Management Authority not to issue an export permit for specimens of a species listed in Appendix I or II when the Scientific Authority has advised that the export will be detrimental to the survival of that species.

The law should also provide that valid CITES documentation should also be presented for specimens in transit with or without trans-shipment.

With regard to trade with States which are not parties to CITES, the law should make it clear that comparable documentation is required and that such documentation must substantially conform with the requirements of the Convention.

General Controls

The Act should prohibit the possession, transport, sale, offering for sale, and purchasing of any specimen of CITES-listed species which have been imported, introduced from the sea, or taken from the wild, without the required permits. It should, in addition, provide that it is up to the possessor or trader to prove that the specimen was lawfully introduced into the country, or otherwise obtained.

Control of traders

Legislation should provide for controls applicable to all traders in CITES specimens.

Traders should, therefore, be defined as all persons who, for commercial purposes, purchase, handle, process, sell, breed, ranch or propagate specimens of CITES-listed species.

The law should provide that traders so defined should be registered or licensed, that they keep records of all their transactions with the names of their suppliers and consignees (an exception can of course be made for private persons buying from retailers), that their premises and documents may be inspected, that

they may be required to provide any information or document requested from them, and that they keep their records and documents for a specified period of time. In the specific case of ranching operations, any specimens removed from the wild as a result of such operations, should be recorded. In all cases, live specimens which have died while in the custody of the trader should also be recorded.

The competent authority should be empowered to impose any condition to the registration of traders, or to the licenses to them, and to inspect or revoke, temporarily or permanently, any registration or license in the case of irregularities or of violations of the Act, the regulations, any other legislation relating to wildlife or animal welfare, or the conditions attached to the registration or license.

Ports of exit and entry

- a) Legislation must specify that the permits and certificates required under the Act must be presented to the Customs, and/or any other competent authority which may have been designated under the Act, prior to the clearance of the specimens. It should make clear that this rule also applies to the presentation of export permits, re-export certificates and certificates of origin from foreign countries and of any other certificates required by the convention at the time at which the specimens are presented for import.
- b) The designated authorities should have the duty to control the existence and validity of all permits and certificates and the power to seize specimens where no permit or certificate is presented, when the permits and certificates presented are invalid, when they have reasonable grounds to believe that they are invalid, or when there are reasonable grounds to believe that the specimens presented for export or import do not correspond to those indicated by the permit or certificate.
- c) The respective powers of the customs and of any other authority which may have been designated under the Act to carry out border controls in respect of CITES specimens should be specified. The customs, and any other competent authority, should be empowered to call upon experts, whenever there are doubts on the identity of the specimens presented for clearance. They should also be able to proceed with any required investigation and to detain specimens when there are reasonable doubts on their identifications, pending the results of further investigation.

**F.3. BIBLIOGRAPHY OF SELECTED TRAINING MATERIAL:
CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES**

- F.3.1. Text of the Convention, Washington 3 March 1973.
- F.3.2. CITES Permit/Certificate Form.
- F.3.3. Status of Ratifications.
- F.3.4. "Guidelines for legislation to implement CITES" by Cyrille de Klemm, IUCN Environmental Policy and Law Paper No 26, 1993.
- F.3.5. International Criminal Police Review, vol. 45, 1990.
- F.3.6. Resolutions of the Conference of the Parties, Kyoto 2/13 March 1992.
- F.3.7. Decisions of the Standing Committee on Trade in Rhinoceros Horn and Tiger Specimens, Brussels, 6-8 September 1993.

SUMMARY OF CITES

CITIES

The Convention makes it mandatory for parties to take the following minimal measures to give effect to and enforce its provisions. The underlying duty of the parties is embodied in Article VIII which emphasizes that they shall take appropriate measures to enforce the provisions of the Convention, and to prohibit trade in specimens in violation thereof. Parties must at least take the following action:

- * Penalize trade in, or possession of such specimens, or both;
- * Provide for the confiscation or return to the state of export of such specimens.

Additionally, it is in the discretion of individual parties when they deem it necessary, to provide for any method of internal reimbursement for expenses incurred as a result of the confiscation of a specimen traded in violation of the measures taken in the application of provisions of the Convention. Parties are also required to designate one or more Management Authorities and to designate one or more Scientific Authorities (see Article IX).

Institutional Structure

Article XII of the Convention establishes a secretariat. Upon entry into force of the Convention, the Executive Director of UNEP shall provide the CITES secretariat. The secretariat's functions as provided by the Executive Director, may be complemented by appropriate NGOs or other international agencies.

The Secretariat has a whole host of duties including arranging for, and servicing, meetings of the parties, undertaking scientific and technical studies in accordance with programmes authorized by the conference of the parties, and making any recommendations for the implementation of the aims and provisions of the present Convention, including the exchange of information of a scientific or technical nature.

The Conference of the Parties is an important component of the Convention and provides the principal mechanism for guiding its work. Article XI requires that the secretariat shall call a meeting of the Conference of the Parties not later than two years after the entry into force of the Convention. Thereafter, the secretariat is required to convene regular meetings at least once every two years, unless the conference decides otherwise.

The conference serves as the focal point for reviewing the activities of the Convention and the secretariat. It may, from time to time, consider and receive any reports presented by the secretariat or any party on any matter related to the Convention, review the progress made towards the restoration and conservation of the species provided in the appendices and, where appropriate, make recommendations for improving the effectiveness of the Convention.

The Convention adopts a flexible approach regarding participation in its meetings. Thus, under Article XI (7), any body or agency qualified in the protection, conservation or management of wild fauna and flora shall be admitted and represented at meetings unless at least a third of the parties present object.

Interestingly, the Convention attempts to set out only minimum standards, leaving it to the parties if they so desire, to legislate upon any matters governed by the Convention, adopting measures more arduous than those provided in it. This is reflected in the provisions of Article XIV which stipulate that the Convention shall in no way affect the right of parties to adopt stricter domestic measures regarding the conditions for trade, taking possession or transport of specimens included in the Appendices to the Convention, or their complete prohibition.

It is clear that while international rules and regulations prohibiting and limiting trade in endangered plants and animals are valuable in themselves in that they send out clear signals concerning the attitude of the international community to the practice of clandestine dealings in flora and fauna under threat of extinction, it will really be at the national level that effective mechanisms to halt illegal trade will take place. It therefore seems to be a concomitant obligation of parties under the Convention, to adopt and establish proper legislative regimes to complement the Convention. Without domestic legislative complementaries envisaged, for example, under Article VIII, the effectiveness of the Convention will to some extent be limited. A necessary corollary and part of a contracting State's responsibility under the Convention would be to put in place appropriate enforcement mechanisms to give practical meaning to its obligations. This would require for example that States ensure that they have appropriately trained personnel who can recognize species in any one of the three appendices to the Convention, and monitor and process breaches of the Convention.

The Convention on International Trade in Endangered Species of Wild Fauna and Flora represents a significant contribution in the conservation of the world's biodiversity. Illegal trade in endangered plants and animals is a phenomenon which has existed for some time now, and smugglers of them, whether for commercial gain or personal enjoyment who continue to engage in illegal trafficking, now risk severe civil and sometimes criminal penalties in many countries. There will of course be the occasional trader who might sometimes succeed in crossing international borders with his illicit goods. However, to the extent that there is an emerging body of scientific evidence that the Convention, supplanted by national legislative frameworks, can and has contributed to the reduction of illegal trade in endangered plant and animal species, it can be argued that it represents a positive feature of global attempts to enhance biodiversity for future generations of mankind.

COUNTRY PRESENTATION BY MALAYSIA ON THE CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA (CITES)

Introduction

Malaysia became a party to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in 1977. This carries with it certain obligations with regard to the flow between countries of flora and fauna identified and excepted as endangered and/or threatened species. Any export, re-export or import of those flora and fauna included in the list must therefore receive approval from the authorities concerned.

Administration of CITES in Malaysia

General

In Malaysia, the Ministry of Science, Technology and the Environment was appointed as the Scientific Authority, while the Department of Wildlife and National Parks as the Management Authority. The State of Sabah and Sarawak (which make up East Malaysia) however, have their own Management Authority and acts independently from Peninsular Malaysia.

The Department of Wildlife & National Parks has also designated 3 of its State Department Offices for the issuance of exportation/re-exportation permits of wildlife. Enforcement of the Convention with respect to wildlife is accomplished primarily by the staff of the Enforcement Division of the Department of Wildlife and National Parks, with assistance from Customs and other federal agencies. Customs officers also aid the Department at other points of entry by halting shipments of wildlife entering or leaving the country without authorization.

Verification and identification with respect to plants is primarily the responsibility of the Department of Agriculture. CITES permits are only issued upon the production of the Phytosanitary Certificate from this Department.

Domestic Legislation

The existing local federal legislation which exercises authority on wildlife, i.e. the Protection of Wildlife Act 1976, controls only domestic wildlife but again is limited to some bird species, a few reptiles, most of the terrestrial mammals and insects. Fishes, turtles, amphibians and flora are not included in this legislation. Under the Protection of Wild Life Act, 2 categories of protection are afforded to wildlife:

a) **Totally Protected Animals/Birds**

The possession, import/export are totally prohibited without prior permission from the Minister of Science, Technology and the Environment.

b) **Protected Animals/Birds**

The possession, import/export are regulated under licenses issued by the Department of Wildlife and National Parks.

Local species of fauna which are listed in Appendix I of CITES are totally protected and hence the importation/exportation are prohibited. For local species in Appendix II and III, licenses for export and import are required. Other species which are covered by CITES regulation, the exportation and importation require CITES permit.

Enforcement

Presently, all exports of Appendix II and Appendix III species are accompanied by the CITES export and re-export permit which has been adopted. As far as enforcement is concerned, it stops short at the point of issuing of these permits. However, the Management Authority does insist on the presentation of CITES export permits for importation of species listed in the Appendices.

Conservation issues

The Protection of Wildlife Act 1976 does not apply to plants. The CITES was signed by Malaysia in 1977. However, Malaysia does not have a domestic back-up legislation for plants under CITES.

On protection of plant life, there is no one comprehensive piece of legislation dealing with such protection. At least it is not as comprehensive as to deal with its management and development. Additionally, there is the National Parks Act 1980, whose provisions go a long way towards protecting our flora and fauna.

To ensure the protection of plant life, the Protection of Wildlife Act 1976 has to be amended to include plants listed under CITES, or a Plant Protection Act has to be formulated that not only covers the protection of endangered or threatened plants in terms of trade, but also the protection of these plants in their natural environment. This will require laws that protect the habitat where such plants occur naturally. In the conservation of endangered plant species, the protection of the habitat on which the plants grow must go hand in hand with the protection of species. Coupled with such protection, there must be some agency given the task of monitoring and advising the Government of the distribution and the continual status of such groups of plants. Areas where such plants occur must be identified so that some positive action can be taken to safeguard their existence for the future.

COUNTRY PRESENTATION BY MALAWI ON CITES

Kenyatta Nyirenda

Geographical position

Malawi is a small (but by no means tiny) country in Central Africa. It is landlocked. It shares boundaries with Mozambique, Tanzania and Zambia.

Population

In 1992, the population of Malawi was 9 million people - the figure includes 1 million-plus Mozambique refugees. The refugees have, since mid this year, started going back to Mozambique.

Political history

Malawi obtained its independence from the British in 1964. With regard to the task at hand, I will follow as much as possible the guidelines for the Country Presentation.

A) Problem Identification

Malawi has a large diversity of biotic communities. It possesses an unusually wide range of vertebrate, estimated at more than 1,200 species, including 190 of mammals, 620 of birds, and 100 of reptiles. In particular, Malawi has one of most the diverse fish fauna in the world, with 400 described species and a further 200 known, but not yet described. Endemism is very high as only about 20 of these species are found elsewhere.

Malawi has, however, relatively small numbers of elephants (about 2,000), lions (about 150), and leopards (about 125).

Despite these small numbers, poaching is there and was particularly widespread in the early 1980's which led to the reduction in the elephant population from 4,500 animals in 1981, to 2,000 in 1989, and the elimination of all but 10 black rhinoceros.

With this state of affairs, the Government realized that unless protective measures are taken, most of the endangered species of wild fauna and flora would be totally depleted.

B) Solution Identification

Studies conducted by the government showed that the endangered species of wild fauna and flora were subject to substantial levels of illegal international trade and that domestic legislation was not an effective solution to such a problem. The answer lay in international cooperation. In recognition of this fact, Malawi became a party to the Convention of International Trade in Endangered Species of Wild Fauna and Flora (CITES) on 5 February 1982.

Malawi's accession to CITES also confirms the strong commitment of the Malawi Government to participating in global conventions designed to strengthen international cooperation in environmental protection. Malawi has acceded to several important agreements, including the International Plant Protection Convention, the African Convention on Conservation of Nature and Natural Resources and the Convention Concerning the Protection of the World Cultural and Natural Heritage.

C) **Solution Implementation**

With regard to CITES, Malawi has gone a long way in complying with the provisions thereof:

i) **Proper National Legislation**

The New National Parks and Wildlife Act (the Act) prohibits the import or export, without permit, of species listed in appendixes to CITES. The Act also prescribes stiff penalties. For example, the maximum term of imprisonment for illegal dealing in endangered species is seven years. The Act also provides for confiscation of illegally-traded or -obtained endangered species as required by Article VIII.1 of CITES.

ii) **Reports**

In compliance with Article VIII.6 and 7 of CITES, Malawi has followed all reporting requirements.

iii) **Management and Scientific Authorities**

Pursuant to Article IX of CITES, both a Management Authority and a Scientific Authority have since been designated.

In order to effectively restrict international trade in endangered species of wild fauna and flora, the government needs to give more attention to subsidiary legislation and the training of enforcement officers.

The Act contains, at most, general principles of CITES. Consequently, promulgation of subsidiary legislation is required to supplement and give flesh to the general principles.

The enforcement officers, i.e. customs, police officers, patrol scouts, etc., do not have the necessary expertise, especially on the identification of species. They are not in a position to fully exercise their powers of controlling or monitoring specimens. Therefore, to ensure effective enforcement of CITES provisions, enforcement officers should undergo special training on the subject of CITES.

THE CONVENTION ON MIGRATORY SPECIES

Douglas Hykle

The Convention on the Conservation of Migratory Species of Wild Animals is an intergovernmental treaty that aims to conserve terrestrial, marine and avian migratory species over the whole of their range. It is one of about half a dozen global conventions concerned with wildlife conservation, each with its own area of specialization.

Migratory species are especially vulnerable to a wide range of threats, including shrinking habitats in breeding areas, excessive hunting along migration routes and degradation of feeding sites. The need for an international convention to co-ordinate an effective response to these threats was recognized in the early 1970s. The Bonn Convention or CMS was concluded in 1979 and entered into force on 1 November 1983. As of late 1993, its membership had grown to over 40 parties from Africa, America and Caribbean, Asia, Europe and Oceania.

Parties to the Convention work to conserve migratory species and their habitat by providing strict protection to migratory species that have been categorized as endangered; concluding multilateral agreements for the conservation and management of migratory species; undertaking cooperative research activities.

The work of CMS is geared towards migratory species listed in the two annexes to the Convention. Appendix I is reserved for species that are in danger of extinction throughout all or a significant portion of their range. Appendix II lists species whose conservation status requires or would benefit from international co-operative agreements. Where appropriate, a species may be listed in both Appendices.

Appendix I currently includes about 50 species, among others, the Siberian crane, white tailed eagle, hawksbill turtle, Mediterranean monk seal and dama gazelle. CMS has a unique role to play in focusing attention on the conservation needs of these species. Many of them are not dealt with adequately by other global wildlife conventions due to limitations in their scope coverage. The obligations of CMS are very direct. Range States of Appendix I are required to conserve their habitat, to counteract factors impeding their migration and to control other factors that might endanger them.

CMS is often referred to as a framework convention because it provides for the development of specialized sub-agreements for individual species or, more often, for groups of species listed in Appendix II. These agreements may range from legally binding multilateral treaties to less formal memoranda of understanding (MOUs). The more formal agreements should provide for coordinated species conservation and management plans; conservation and restoration of habitat; control of factors impeding migration; co-operative research and monitoring; and exchange of information and public education.

CMS agreements offer several advantages. They are readily adaptable to regional needs since they can be tailored to suit different taxonomic groups and regional variations. They are intended to cover the entire range of species for which conservation actions are needed. Therefore, unlike bilateral arrangements between two countries, gaps in geographic coverage can be reduced to a minimum. Multilateral agreements allow for better co-ordination of conservation efforts and pooling of expertise, thereby reducing duplication of actions. Their effectiveness is also attractive to governments: significant cost savings can be realized because conservation plans for many species can be incorporated in a single agreement with common administrative arrangements. In addition, CMS agreements may stand a greater chance of attracting financial support from international funding agencies since they reflect the common will of many countries to take joint actions to conserve important components of biodiversity.

Several CMS agreements have already been concluded:

- * **The Agreement on the Conservation of Seals in the Wadden Sea** came into force in 1991. It provides for the development of a conservation and management plan for common seals, habitat protection, measures to reduce pollution, coordination of research and monitoring, prohibition of most taking, and public awareness initiatives.
- * **The Agreement on the Conservation of Bats in Europe** will enter into force in January 1994. It aims to address threats to bats arising from habitat degradation, disturbance of roosting sites and harmful pesticides. The first meeting of the parties is scheduled to be held in the first half of June 1995 in the United Kingdom.
- * The **Bonn Convention** is playing an increasing role in international efforts to conserve small cetaceans, including dolphins, porpoises and certain whales.
- * **The Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas (ASCOBANS)** is expected to enter into force in early 1994. The agreement encourages co-operation among Range States with respect to habitat conservation and management, surveys and research, and public information.

A number of States concluded a Memorandum of Understanding in 1993 with the aim of ensuring the survival of the West and Central Asian populations of the Siberian crane, which are on the brink of extinction.

For each of these Agreements, fully operational or interim secretariats have been established and are working actively to facilitate their implementation.

A proposal for a comprehensive **Agreement on the Conservation of African-Eurasian Migratory Waterbirds** was circulated in late 1993 to the governments of 116 countries. This Agreement, so far the largest of its kind, aims to conserve over 200 migratory bird species throughout Africa, Europe and parts of Asia. An intergovernmental meeting to discuss the proposal is planned for June 1994 in Nairobi.

A number of other Agreements are also being developed for: (1) small cetaceans of the Mediterranean and the Black Seas; (2) migratory waterbirds of the Asian-Pacific region; (3) the highly endangered Slender-billed curlew; and (4) antelopes in arid zones such as the Sahelo-Saharan region and Central Asia. Several others may warrant development in the near future for a wide range of taxa, including albatrosses, bustards, small cetaceans in other regions, marine turtles and dugong.

A small secretariat under the auspices of UNEP provides administrative support to the Convention. Its functions include developing and promoting Agreements, processing information, liaising with governments and organizations, servicing meetings and carrying out essential administrative tasks. The Secretariat is currently finalizing a strategy for the future development of the Convention.

The decision-making body of CMS is the Conference of the Parties, which meets at intervals of about three years, to review implementation of the Convention. It is scheduled to meet in Nairobi from 7 to 11 June 1994. A small Standing Committee provides policy and administrative guidance between regular meetings of the parties. A Scientific Council consisting of experts appointed by individual member states and by the Conference of the Parties give advice on scientific matters. In addition, a number of working groups have been established under its auspices to promote work on Agreements for several groups of species.

Although it is still relatively young, compared to a number of other international conservation treaties, CMS has begun to consolidate its own field of activity. Nevertheless, there is considerable scope for strengthening ties with sister conventions. Efforts are under way to develop a strategy for the future development of the Convention, which will seek to enhance CMS' responsiveness to the needs of developing countries, particularly through the catalyzation of projects for migratory species conservation.

G.1. PRESENTATION OUTLINE:

CONVENTION OF MIGRATORY SPECIES (CMS)

Presented by:
Mr. D. Hykle
Programme Officer
Secretariat of the Convention for Migratory Species.

- G.1.1. Brief introduction to the development of the Convention
- G.1.2. Relationship with other international instruments
- G.1.3. Taxonomic and geographic coverage of CMS
- G.1.4. Operation of the convention
 - Obligation vis-a-vis Appendix I species
 - Agreements for Appendix II species
- G.1.5. Costs/benefits of membership
- G.1.6. Institutional structures
- G.1.7. National implementation
- G.1.8. Funding mechanisms

COUNTRY REPORT BY KENYA ON THE CONVENTION ON MIGRATORY SPECIES

Simon Mbarire

Introduction

Kenya covers an area of 582,646 square kilometers, of which 571,416 square kilometers is dry land and 11,230 square kilometers is open water. The country exhibits considerable climatic variations from the humid coastlands to the cool highlands. About four-fifths of the land (473,000 square kilometers) is arid or semi-arid. Only a mere 18 per cent (104,844 square kilometers) constitutes the medium and high potential areas which support two-thirds of the country's population. Most of the arable land is utilized for agriculture, while the remaining land area comprising 36,300 square kilometers have been set aside for wildlife conservation. Only 2,008 square kilometers are left to natural and exotic plantation forests.

Kenya lies astride the equator. The 50° latitude marks roughly the northern boundary. The southern boundary runs in a south-easterly direction from about 10°S to latitude 4.40°S. Kenya's western border extends from about 34°E longitude while the eastern border is about 41°E. A coastline of about 500 kilometers fronted by the Indian Ocean runs in a north east-southwesterly direction from 10°40'S to 4°40'S latitude.

Kenya's neighbors are Ethiopia to the north, Sudan to the north-west, Somalia to the north-east and Tanzania to the south. Lake Victoria, the world's second largest freshwater lake, lies to the west.

The Great East African Rift Valley crosses Kenya in a north to south direction from lake Turkana to lake Magadi. On the Rift Valley floor are several fresh and alkaline lakes and extinct volcanoes.

Kenya is divided into physical regions according to altitude. There are: (1) the Coastal Plains; (2) The Savanna Plateaux (Nyika); (3) Semi-deserts; (4) The Lake Victoria Basin.

Being on the equator, Kenya has no marked seasonal weather changes. Temperatures are largely determined by the altitude, location and the monsoon winds which blow in from the Indian Ocean during most of the year, keeping temperature below 30 degrees Celsius. The hottest month is February, with an average temperature of about 27 degrees Celsius. July is the coolest month with the mean temperature being about 20 degrees Celsius. Rainfall in the highlands and around the lakes is over 1000mm per year, while in some places, particularly in the semi-arid areas, rainfall can be as low as 200mm during the year.

Migratory Species of Wild Animals

Many animals migrate in response to biological requirements, such as the need to find a suitable location for breeding and raising young, and to be situated in favorable areas in which to feed at other times of the year. In some cases, these specific requirements are met in locations separated by thousands of kilometers. Migration has both advantages and disadvantages. It allows a species to exploit resources periodically in areas that would otherwise not be suitable for continuous use. On the other hand, it means that animals are biologically dependant on the specific sites they find at their journey and along the way.

Kenya has 1,741 known species of fauna and 6,500 known species of flora. Of the protected wildlife, 24 species are fully protected by the Wildlife Act, while 10 species are partially protected. At present, Kenya has 21 national parks, 4 national marine parks, 23 national reserves, 5 national marine reserves, and local sanctuary. Seven identified areas are currently in process of being designated as national parks, of which 3 are already reserves. Most of the well-studied animals are found in these areas.

Some of the recorded species of fauna are migratory in nature. As such, Kenya is a Range State - the term used to describe countries that exercise jurisdiction over any part of a species "distribution." For example, several "wintering areas" and stop-over sites of birds migrating from the Southern African region to the north, from western Siberia to the south and from Asia Minor to the south west, are located in Kenya. Some paeartic species of Anatidae (ducks, geese and swans), strokes, ibises and spoonbills, stop in Kenya.

These migratory animals are threatened by loss of habitats and degradation of feeding sites due to drainage of wetlands for agricultural purposes, pollution, recreation and disturbances - boating, hunting, inappropriate development programmes, rapid population growth, etc.

The Convention and Kenya's National Law

There is much legislation enacted in Kenya that touch on environmental issues, but they are uncoordinated and sector-specific. There is no comprehensive and coherent national policy on environment management and protection, such as could guide all concerned in a holistic way about proper management of the environment. Existing policies are fragmented and sectoral. Legislation is passed on an *ad hoc* basis as required.

Kenya is not a signatory to the Convention on Migratory Species of Wild Animals, but it is in the process of signing the Convention. It is my view that Kenya had not signed the Convention earlier due to a number of factors:

- a) Lack of awareness of or insufficient knowledge about the Convention to be able to make an informed decision about joining;
- b) Lack of necessary administrative capacity;
- c) Insufficient enforcement capacity and mechanisms for implementation;
- d) Lack of appropriate domestic legislation for the implementation of the Convention; and
- e) Domestic scientific and technical expertise is not sufficiently developed.

Conclusion

I believe that now that Kenya intends to review the Wildlife Act in 1994, the issues I have mentioned above will be addressed. Kenya's intention to join other Contracting Parties to the CMS in their efforts towards improving the conservation status of migratory species which are particularly vulnerable to a wide range of threats (which include shrinking habitats in breeding areas; excessive hunting along migration routes, and degradation of feeding sites), will contribute a lot of benefits to the present and future generations.

G.2. EXERCISE ON THE CONVENTION ON MIGRATORY SPECIES (CMS)

G.2.1. Short discussion of the process needed in each country to ratify or accede to the Convention.

G.2.2. The drafting exercise itself concentrates on the particular provisions of the Convention which require the adoption of national legislation and to the institutional arrangements that will be needed at national level to implement the convention effectively.

- a) Designation of an authority or authorities which shall be responsible for:
 - Implementation of the provisions of Article II, para 4 with respect to endangered migratory species listed in Appendix I (i.e. conservation/restoration of habitat, mitigating obstacles to migration, controlling/preventing other harmful factors, such as exotic species);
 - Enforcement of the prohibition of "taking" required under Article III, para 5, certification of any exceptions that may be permitted, and fulfillment of any reporting requirements in this regard;
 - Fulfillment of other reporting requirements of the convention, in accordance with Article VI;
 - Cooperation/Coordination with other parties.
- b) Designation of a Scientific Councillor (Article VIII) from a Government institution or other body;
- c) Establishment of effective communication channels between the bodies responsible for implementing convention (e.g. for both terrestrial and marine species) at a state/provincial, regional or national level;
- d) Coordination with other Ministries/agencies that may affect or be affected by the full implementation of the Convention;
- e) Development of Agreements: elaboration, negotiation, adoption, signature, ratification, implementation (subject to be covered in presentation; time permitting, it can be taken up in the drafting groups).

G.3. BIBLIOGRAPHY OF SELECTED TRAINING MATERIAL: THE CONVENTION ON MIGRATORY SPECIES

- G.3.1. CMS Booklet
- G.3.2. Convention Text
- G.3.3. Appendices I & II
- G.3.4. Proceedings of the Third Meeting of the Conference of the Parties, Geneva 1991.
- G.3.5. Summary of Outcomes of the Third Meeting of the Conference of the Parties, Geneva 1991.
- G.3.6. Map of Parties to CMS
- G.3.7. CMS Bulletin: 21.07. 1993
- G.3.8. Sample Instrument of Ratification/Accession + Note Verbale (for Potential Parties)
- G.3.9. Agreement Summary Sheets
- G.3.10. Agreement on the Conservation of bats in Europe
- G.3.11. Agreement on the Conservation of small cetaceans of the Baltic and North Seas
- G.3.12. Memorandum of Understanding Concerning Conservation Measures for the Siberian Crane
- G.3.13. Draft Agreement on the Conservation of African-Eurasian Migratory Waterbirds.
- G.3.14. Draft Agreement on the Conservation on Migratory Waterbirds of the Asia-Pacific Region.
- G.3.15. List of "CMS" in Individual Countries.

H.1. INTERNATIONAL MANAGEMENT OF WATER RESOURCES

Presented by:
Mr. M.S. McCaffrey
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Sacramento, California, USA

The availability of transboundary fresh water resources of adequate quantity and quality for sustainable development is best assured through agreements between states sharing catchments located in more than one country. These agreements may cover individual drainage basins and may regulate the relations of the States Parties in respect of a number of catchments in their border areas. Recently, draft articles on international watercourses have been adopted on first reading by the United Nations International Law Commission.

The main provisions of this draft convention are the equitable utilization of shared water resources by all riparians (art. 5 & 6) and the principle of no harm (*sic utere tuo ut alienum non laedas*), codified by Art. 7. Other provisions concern the duty to negotiate, to cooperate and to take positive measures against pollution and emergency situations. The riparian States of an international watercourse are also expected to create joint institutions for the management of their shared water resources.

The International Law Commission Draft Convention adopted a framework approach. Thus, it may be used as a guide in the presentation of regional water agreements. These agreements should be tailored to meet the needs of the populations in, and to suit the characteristic of, the drainage basin concerned. Such agreements should provide for integrated water resources management (including protection), use and development, as recommended in chapter 18 of Agenda 21 adopted at the United Nations Conference on Environment and Development in Rio de Janeiro (June 1992).

PRESENTATION OUTLINE (PART 1)

INTERNATIONAL MANAGEMENT OF WATER RESOURCES

Mr. S. McCaffrey

H.1.1. Introduction

- a) The availability of transboundary freshwater resources of adequate quantity and quality for sustainable development is best assured through agreement between States sharing catchments located in more than one country.
- b) These agreements may cover individual drainage basins or may regulate the relations of the States parties in respect of a number of catchments in their border area.
- c) This presentation will review the approach of the United Nations International Law Commission to regional water agreements and will summarize the rules contained in the draft articles adopted by the ILC on the first reading in 1991. Against this background, possible elements of regional water agreements will be considered, with particular reference to applicable sections of Agenda 21.
- d) Since the training programme contains a separate module on fresh water resources management, purely national strategies will be touched on from time to time.

H.1.2. Regional Water Agreements: The Approach of the International Law Commission.

- a) Introduction to the draft articles
- b) The framework agreement approach of the draft articles
- c) Watercourse agreements
- d) The basic obligations of riparian States under the draft articles
- e) Management of international watercourses under the draft articles
- f) Use of the draft articles as a guide in the preparation of regional water agreements

H.1.3. Elements of Regional Water Agreements

- a) Regional water agreements should be tailored to meet the needs of the populations in, and to suit the characteristics of, the drainage basin concerned.
- b) Such agreements should provide for integrated water resources management (including protection), use and development, as recommended in Chapter 18 of Agenda 21 adopted at the United Nations Conference on Environment and development in June 1992.
- c) Brief review of the kinds of provisions contained in illustrative regional water.

H.1.4. Conclusion

H.2. EXERCISE: INTERNATIONAL MANAGEMENT OF WATER RESOURCES

H.2.1. Your government plans to construct a hydro-electric dam on the banks of the river X which runs through your country as well as through two other countries, Borderland (upstream) and Frontierland (downstream). What would you advise your government in regard to these neighbouring countries? What are the rights and duties of your country as far as the use of this watercourse is concerned, both on the substantive as well as on the procedural side? Please refer to the International Law Commission Draft Articles on the Law of the Non-Navigational Uses of International Watercourses (text at your disposal).

H.2.2. Within the territory of your country, numerous villages are situated both upstream and downstream of the planned dam. The population of these villages is in the thousands. The inhabitants are mainly farmers and shepherds. What advice can you give to your government regarding the future of the inhabitants of those regions?

H.2.3. You are aware of the difficulties for a developing country to finance a hydro-electric dam project as the one described above. The World Bank, which plays an important role in project financing, adopted a set of guidelines on the subject. Referring to these guidelines, what steps can you advise your government to take in order to request financial/technical assistance from the World Bank?

H.2.4. The site where you plan to construct the dam lies exactly at the border between your country (upstream) and Frontierland (downstream). What advice would you give your government concerning the optimal and ecologically rational management of the watercourse?

H.2.5. Supposing the river runs through various countries and your country's project upstream might be in conflict with a project initiated jointly by Tarland and Frontierland (both downstream). What advice would you give to your government?

**UNEP/UNITAR TRAINING PROGRAMME IN ENVIRONMENTAL LAW AND POLICY
(Nairobi, 29 November - 17 December 1993)**

**SYNOPSIS OF LECTURE ON
REGIONAL AND BILATERAL AGREEMENTS ON SHARED WATER RESOURCES
AND
THEIR IMPLICATIONS FOR DOMESTIC LEGISLATION**

Given by S. Burchi, Senior Legal Officer, FAO
(5 December 1993)

Regional and bilateral agreements on shared water resources lay down obligations for the performance of which domestic legislation and administering institutions must be available in the countries party to the agreements.

The availability of domestic legislation providing for systems of Government-regulated water abstractions from watercourses and Government-regulated waste discharges into watercourses is implicitly required by the substantive obligations to ensure the economic and effective use of Mekong waters, and to restrict pollution from return flows, laid down in Article XIX of the Principles for the utilization of the waters of the lower Mekong Basin.¹ Legislation for the prior screening of projects for the detection of detrimental environmental impacts is also implicitly required to give effect to the substantive obligation laid down in Article XXIV of the Principles to avoid or minimize the detrimental effects of Mekong Basin water development projects. Likewise, the procedural obligation to keep the Niger Basin Authority informed of projects and works which Niger Basin States intend to carry out in the Basin, and the substantive obligation not to undertake polluting works, enshrined in Article 4.4. of the Convention Creating the Niger Basin authority² imply nationally regulation of water abstractions and water disposal in all the states party for them to be able to discharge effectively these obligations.

Sometimes, the requirement to have in place national legislation is quite explicit, as with the Convention for the Protection of the Rhine against Chemical Pollution's³ requirements that the discharge of nominated substances into the Rhine be subject to national regulation and restrictions (Articles 3,4, 6(4) and 7(1)). Similarly, explicit requirements for national regulation of water abstractions and waste disposal have been incorporated in Article 2(8) of the Proposed Protocol on Shared Watercourse Systems in the Southern African Development Community (SADC) Region.

Regulatory requirements of the same kind can be implied also in straightforward "water apportionment" agreements, i.e., agreements whereby countries sharing a water body allocate between or among themselves quantities or volumes of available waters, for separate use and development. The Indo-Pakistan Indus Waters Agreement⁴ is a classic case in point, where Pakistan's and India's mutual

¹ Adopted in the form of a Joint Declaration by Cambodia, Laos, Thailand and Vietnam in Vientiane, 5 January 1978

² Done at Faranah, 21 November 1980 and signed by Benin, Burkina Faso, Cameroon, Chad, Ivory Coast, Guinea, Mali, Niger and Nigeria.

³ Done at Bonn, 3 December 1976. France Germany, luxembourg, the Netherlands, Switzerland and the European Economic Community are party to it.

⁴ Done at Karachi, 1960

obligations under, among others, Article II(2), (3) and (5) not to interfere or to allow limited interference with flow of certain rivers, presupposes the availability of legislation regulating water abstractions in both countries.

Finally, implicit or explicit requirements as to the availability of national legislation are not limited to regulatory-type legislation, regulating water abstractions and waste disposal into water resources. For instance, Article 8 of the Convention Concerning the Legal Status of Works of Common Interest⁵ to the member states of the Senega River Development Organization (OMVS) expressly obligates party states to enact land acquisition legislation, so as to enable OMVS to gain access to the lands required for the construction of works of "common interest" to its member States.

In this last case, the enactment of domestic legislation is the very object of the international obligation undertaken by the OMVS member states, whereas in all other cases cited above, it constitutes the instrument by which an international obligation can be performed. This difference is of no practical significance, however, given the strict instrumentality of an implied obligation to enact legislation to the performance of the international substantive or procedural obligations illustrated above.

⁵ Done at Bamako, 21 December 1978. Mali, Mauritania and Senegal are parties to it.

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COUNTRY PRESENTATION BY VIETNAM ON WATER RESOURCES LAW

Dac Hy Nguyen

Introduction

Vietnam is located in South East Asia. It shares common borders with China, Laos and Kampuchea. It has a total area of 332,000 square miles. Its present population is in the vicinity of 70 million people. The average annual income is about 200 US dollars per person. Agriculture contributes approximately 50% to GDP, the industrial sector 35%, and the remaining 15% from other sectors.

Water Resources

A tropical climate with high rainfalls provides favorable conditions for the formation of large rivers in the country.

Use of Water Resources

Water resources play an important role in the economic development of the country. They are used mainly for the following purposes:

- a) Irrigation
- b) Industrial
- c) Aquatic breeding and wetlands
- d) Household water supply (urban and rural)
- e) Transportation

As projected to the year 2000, in order to increase the total cultivated area under irrigation scheme, up to 6.5 on 10 million hectares, the total water volume needed will be 60 cubic kilometric of water needed for a population - million would be estimated at 8 cubic kilometric, for industrial: 20 cubic kilometric. The overall water volume needed would reach 90-100 cubic kilometric, approximately 30% of the water resources of the entire country.

Pollution Problems

They are due to industrial development, urbanization, population growth, and increasing demand for water use. Increasing liquid wastes from human settlements and industrial areas have contributed to the pollution of inland waters, most notably rivers and lakes. This is compounded by oil spillages due to exploration activities, particularly off the coastlines. The surface water, ground water and the seas off the Vietnamese coasts are seriously polluted. Pollution of water resources have affected the general health of the population, as well as having adverse effects on the economy. In places like Hanoi and Ho Chi Minh, water in sewage canals is heavily polluted with high organic contents.

Economic and industrial development, especially in the last two decades, has profoundly affected the country's water resources. Some of the factors which have caused this include: deforestation, forest exploitation, mining, and the attendant soil erosion that these activities bring about. A different type of problem, but one related to and caused by land use patterns, is that in some areas, streams have turned dry. The availability of ground water resources fit for human consumption has been reduced as a consequence of pollution from liquid waste contamination, particularly in the urban areas. Industrial and agricultural processes have added to the pollution of water resources.

Solution

The problems presented by pollution of Vietnam's water resources have been recognized by the government. It realizes that there is a need to ensure the sustainable development of water resources, and to protect them, consistent with the development needs of the country. The responsible authorities have implemented the following measures to address the problems brought about by the indiscriminate and irresponsible use of water resources. These include:

- a) Proper planning of the utilization of surface water supplies so that they can be used rationally, and that they are integrated with overall development needs;
- b) Attempting to mitigate and control the pollution of water from industrial sources. This is being carried out by greater monitoring of the processes of production through factories;
- c) Controlling the use of fertilizers and pesticides so as to reduce water contamination resulting from them;
- d) Better control and management of water pollution by the establishment of more efficient water monitoring systems;
- e) Promulgating a Law on Environmental Protection which establishes the appropriate criteria and standards related to water discharges. The legislation also deals with the treatment of water wastes. Article 15 of this law states: "organizations and individuals are obliged to protect water resources, water supply, and drainage systems, green trees, hygienic projects, to observe regulations on public hygiene in urban, rural areas, in tourist resorts and other areas."

Article 21 states: "Appropriate technologies must be applied in exploration, exploitation, processing, transportation and storage of oil in order to ensure environmental hygiene...and to protect relevant environment components. Appropriate alternatives and equipment must be ready to prevent, resist oil slick in the sea, to treat in time and minimize the damage caused by oil slick." Other Articles in the law that relate to the preservation and conservation of water resources include Articles 22, 23, 24, and 29.

Legislation also provides for international co-operation in the field of water resources. To this end, a regional committee for the better utilization of the resources of the Mekong River has been established. Other measures which have been taken to better address the problems of water pollution include a National Action Plan on Environment for sustainable development, covering the period 1991-2000. There are also moves to ensure better controls over the management of oil exploration activities to minimize spillage.

Results

To date, the results of mechanisms and measures to better manage the country's water resources, some of which have been outlined above, have been limited. Some of the reasons for this include the delay in the implementation of appropriate measures. Some of the factors which have contributed to this situation include: the need for greater investment, lack of public awareness about the need for greater protection

of water resources, lack of environmental and natural resource planning, lack of integration between conservation efforts and development, lack of more scientific environmental legislation and the absence of data, lack of watershed management systems, lack of technical information and know-how, and the need for greater technology transfer.

Improvement Measures

There is a need to improve the organization of state bodies dealing with the environmental management of the country's water resources. Special concerns should be given to strengthening institutional structures for sustainable development of Vietnam's water resources and ecosystems. To some extent, these challenges and problems can be addressed by more rational policies and legislation, more exacting water quality standards, and better systems of monitoring.

MATERIALS DISTRIBUTED TO PARTICIPANTS

MULTILATERAL

1. The Convention for the protection of the Rhine against chemical pollution.
2. Joint Declaration of Principles to the utilization of the waters of the lower Mekong Basin.
3. The proposed protocol on shared watercourse systems in the Southern Africa Development Countries (SADC) region.

BILATERAL

1. Agreement between the Federal Republic of Nigeria and the Republic of Niger.
2. The Indus Water Treaty: Bilateral co-operation between the governments of India and Pakistan for the sustainable utilization of the waters of the Indus System.
3. Agreement between Namibia and South Africa on the establishment of a permanent water commission.

H.3. BIBLIOGRAPHY OF SELECTED TRAINING MATERIAL: INTERNATIONAL MANAGEMENT OF WATER RESOURCES

- H.3.1. PREPCOM/UNCED, "Development of legal instruments for transboundary waters," A/CONF.151/PC/79, 1 July 1993.
- H.3.2. Statute of the committee for co-operation of investigations of the lower Mekong Basin, 31 October 1957.
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- H.3.4. Treaty between Great Britain and the United Nations relating to boundary waters, January 1909.
- H.3.5. Treaty on the river plate basin, Brasilia, 23 April 1969.
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I.1. TRANSBOUNDARY AIR POLLUTION

Presented by:

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Air pollution takes various forms and has both local and global effects: photochemical smog, acid deposition, depletion of stratospheric ozone layer and global climate change. Acid deposition is one of the results of industrial air pollution and most prevalent in the heavily industrialized areas of Europe and North America, with effects such as destruction of forests, lakes and streams. Furthermore, this pollution generally has a transboundary effect. It is called the long-range transboundary air pollution as defined by Article 1 al.6 of the 1979 ECE Geneva Convention on long-range transboundary air pollution. This Convention is the first international agreement to deal with the protection of the atmosphere. It is a framework Convention and its basic substantive provisions concern the development of regional cooperation adopting the best policies and strategies including air quality management systems, control measures compatible with balanced development, in particular by using the best available technology which is economically feasible, and low and non-waste technology.

Concerning the provisions relating to the implementation, the ECE Cooperation program for the monitoring and evaluation of the long-range transmission of air pollutants in Europe (EMEP) provides information on annual concentrations and deposition of SO₂ and other pollutants. The ECE countries adopted also protocols to the 1979 Geneva Convention: the 1984 protocol to finance EMEP; the 1985 sulphur protocol (reduction of the national annual sulphur emissions); the 1988 Sophia Nitrogen Oxides (NO_x protocol which addresses the increasingly serious problem of damage to vital elements of the environment from acid deposition due to NO_x emissions from combustion of fossil fuels used by motor vehicles and stationary sources). This protocol only requires the parties to freeze their NO_x emissions at 1987 levels or to reduce them to that level by the end of 1994. Another instrument of the European regime is the 1991 Volatile Organic Compounds (VOC) protocol which determined the critical levels of pollution (Art. 7,b). In addition to the ECE regime, there are some principles of general international law concerning transboundary pollution: Principle 21 of the Stockholm Declaration and Principle 2 of the Rio Declaration, based upon the 1941 award in the Trail Smelter Arbitration (USA/Canada) and the latin maxim *sic utere tuo ut alienum non laedas*.

I.1. PRESENTATION OUTLINE: TRANSBOUNDARY AIR POLLUTION

Presented by:
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1.1. The problem of air pollution

- A) Air pollution in general
 - i) Definition
 - ii) Forms of air pollution
 - iii) The effects of air pollution
- b) Acid deposition
 - i) Causes
 - ii) Sources
 - iii) Effects
 - iv) Cost
 - v) Long-distance transport

1.2. The Economic Commission for Europe's approach to long-range transboundary pollution

- A) Background
- b) The Convention
- C) Protocol to the 1979 convention on long-range transboundary air pollution on long-term financing of the co-operative programme and evaluation of the long-range transmission of air pollutants in Europe (EMEP)
- D) The 1985 sulphur protocol
- E) The 1988 protocol on the control of emissions of nitrogen oxides or their transboundary fluxes
- F) Overall assessment of the ECE Acid deposition regime

1.3. Principles of General International Law Concerning Transboundary Pollution and their relation to the ECE regime.

- A) Principle 21 of Stockholm Declaration
- B) Trail Smelter and *sic utere tuo ut alienum non laedas*
- C) Consistency of European practice with general principles

TRANSBOUNDARY AIR POLLUTION

I. The Problem of Air Pollution

A) Air Pollution in General

1. Definition (CLRTAP Art. 1(1)). "The introduction by man, directly or indirectly, of substances or energy into the air resulting in deleterious effects of such a nature as to endanger human health, harm living resources and ecosystems and material property, and impair or interfere with amenities and other legitimate uses of the environment."

2. Modern industrial society is increasingly disturbing the delicate natural balance of the atmosphere. The disruption manifests itself, in its most serious forms, as:

- Photochemical smog;
- Acid deposition;
- Depletion of strategic ozone layer;
- Global climate change.

3. The effects of air pollution are many and varied. In general, it affects human health, plants and animals, water and even non-living things such as structures, monuments, statues and art. (Over*). And this leaves aside the cancers, cataracts and cell damage ozone depletion can cause, and the hurricane, floods, submergence of islands, forests and desertification that could result from the 2-5°C rise in average global temperature the UN IPCC says may occur by the end of the next century.

B. Acid Deposition

This lecture will focus upon the phenomenon of acid deposition or "acid rain" - one of the results of industrial air pollution outlined above.

i) Causes

Acid deposition is caused by the emission of sulphur dioxide (SO₂) and nitrous oxides (NO_x), which are transformed in the atmosphere into sulphuric and nitric acid. The acid is then deposited in a dry or wet form on land. It is this wet deposition that is known as "acid rain."

ii) Sources of acid deposition

The primary sources of SO₂ and NO_x that cause acid deposition are:

- coal and oil-fired power plants;
- industrial and residual boilers;
- mobile sources such as automobiles.

Thus, acid deposition is most prevalent in the heavily industrialized areas of Europe and North America. However, it is becoming a problem in Latin America, China and Japan, and there is a high potential for acidification in developing regions of the world, such as Southeast Asia.

iii) Effects of acid deposition

It kills forests, lakes and streams (together with associated aquatic life), damages buildings, monuments, vehicles, art, etc.

iv) Cost of acid deposition

It is very difficult to quantify, especially as ecosystems that are destroyed usually are not assigned a monetary value.

But WCED has estimated, for example, that in Europe, damage to forests, lakes, materials, crops and human health combined, exceed US\$ 13 billion annually. This was compared with an annual cost of US\$ 46-6.7 billion (or about half) of reducing SO₂ emissions by 55-65% by the year 2000 from 1980 levels.

v) Long-distance transport

A feature of acid deposition that makes it especially difficult to deal with is that it often occurs many hundreds, even thousands, of miles from the sources of the emissions that cause it.

- a) "Long-range transboundary air pollution" is **defined** at art. 1(6) of the 1979 Geneva Convention on the subject as:

"Air pollution whose physical origin is situated wholly or in part within the area under the national jurisdiction of one state and which has adverse effects in the area under the jurisdiction of another state at such a distance that it is not generally possible to distinguish the contribution of individual emission sources or groups of sources."

- b) Pollution that is transported long distances through the air generally manifests itself as acid rain or dry deposition. It is carried into the upper atmosphere by natural meteorological conditions or by devices such as tall stacks, which are designed to dilute and disburse pollutants over a wide area.
- c) The phenomenon of LRTAP was first brought to the attention of the international community through a report submitted by Sweden to the UNCHE, held in Stockholm in 1972. The report contained evidence that much of the acidification of Swedish lakes was due to pollution from other far-away countries.

While the report was initially greeted with skepticism by major pollution-exporting countries such as the UK, its findings were later substantiated by a study of the OECD.

Later studies have confirmed that a high portion of acid deposition in many European countries comes from **foreign sources**. E.g. Norway - 92%, Sweden - 82%; Denmark - 64%; Switzerland - 90%; Austria - 85%; Netherlands - 77%; and even in Germany and France - 52%.

- d) Thus, this is **not** a problem of a reciprocal nature; the countries that are **damaged** the **most** by LRTAP often **produce** the **least** of it. More importantly, from a regulatory perspective, unlike ozone depletion and climate change which affect everyone, many of the countries **producing** the **most** such pollution (e.g. UK), **receive** the **least** of it and thus have little incentive to enter into a regulatory regime.

Nevertheless, the major exporters and importers of air pollution and acid deposition, respectively, **have** managed to establish just such a regulatory regime.

II. The Economic Commission for Europe's approach to LRTAP

A) Background

The Conference on Security and Cooperation in Europe (CSCE) called for, *inter alia*, cooperation on the problem of long-range transport of air pollutants in its Final Act of 1975.

The UN ECE, whose membership includes 32 Eastern and Western European States, and Canada and the US, began work on this problem.

This effort culminated in 1979 with the conclusion of the Convention on Long-Range Transboundary Air Pollution, which was signed in Geneva on November 13, 1979.

B) The Convention

1) The Geneva Convention is the first international agreement to deal with the protection of the atmosphere. To put the Convention in historical context in relation to other instruments in the field, it was followed:

- In 1985, by the Vienna Convention on the protection of the ozone layer;
- In 1987, by the Montreal Protocol on substances that deplete the ozone layer; and
- In 1992, by the Framework Convention on Climate Change.

Then, of course, there were also the protocols to the Geneva Convention of 1985 on SO₂, of 1988 on NO_x, and of 1991 on VOCs, SO_x, NO_x and VOCs, to which we shall return later.

2) The Geneva Convention is a **framework agreement**, meaning that it establishes a system for cooperation and an ongoing **process** for dealing with the problem of acid deposition.

3) The Geneva Convention thus should not be regarded as being *sui generis*, but may be taken as an **illustration** of regional cooperation on problems of transboundary air pollution.

4) Basic provisions

The basic substantive provisions of the Convention are to be found in Articles 2, 3 and 6.

Article 2 recites that the parties are "determined to protect man and his environment against air pollution" and provides that they "shall endeavor to limit, and, as far as possible, gradually reduce and prevent air pollution, **including** long-range transboundary air pollution."

Thus, despite its title, the Convention technically applies to air pollution generally, although its main purpose is undoubtedly to deal with long-distance acid rain.

Article 3 calls for the parties to develop policies and strategies to combat the discharge of air pollutants. This is to be accomplished "by means of exchange of information, consultation, research and monitoring."

Article 6 provides that "each party undertakes to develop the best policies and strategies including air quality management systems and as part of them, control measures **compatible with balanced development**, in particular by using the **best available technology** which is **economically feasible** and low and non-waste technology."

5) Analysis

Even a cursory analysis of these core provisions reveals that they are very broad in scope but very weak in substance.

They are broad in the following senses:

- as already mentioned, they apply to **all** air pollution, not only that which crosses a boundary;
- there is no requirement in relation to the **seriousness of the harm** caused; thus, application of the terms of the Convention is not dependent on proof that pollution crosses a border or that it results in substantial harm.
- However, the provisions referred to are **weak** in the sense that they are limited by numerous qualifications which rob them of much force. For example, parties are only required to "**endeavour**" to limit, and, "**as far as possible**," **gradually** reduce and prevent air pollution.

This implies that parties could even allow an **increase** in pollution consistent with the Convention.

Furthermore, Article 6 only requires the parties to "**develop**" but not to "**implement**" policies and strategies for air quality management. It further requires development of only such control measures as are "**compatible with balanced development**" and are "**economically feasible**".

The latter conditions were inserted in order not to hamper unduly the industrial development of European countries such as Spain and Romania.

6) In sum, the 1979 Convention constitutes a framework for cooperation among ECE countries in combating LRTAP. It provides for exchange of information, research and monitoring in order to develop strategies and policies to combat air pollution.

Despite the weakness of its key provisions, the Convention provided the basis for further negotiations concerning the problem among ECE countries.

Furthermore, while it entered into force only in 1983, a resolution adopted when it was opened for signature provided that the signatories would implement the Convention provisionally, on an interim basis, pending the Convention's entry into force.

7) Implementation

It would be extremely difficult to implement the Convention or its protocols without the ECE's "cooperative programme for the monitoring and evaluation of the long-range transmission of air pollutants in Europe" or EMEP, which began operating in 1977, before the Convention was concluded. There are now some 95 sampling stations in 24 countries that form the EMEP monitoring network. On the basis of data collected at these stations, EMEP provides information on annual concentrations and deposition of SO₂ and other pollutants. Its 3 major activities are:

- a) maintaining an inventory of emissions data;
- b) measuring air and precipitation quality; and
- c) developing models to provide estimates of the concentration and deposition of various forms of air pollution.

C) Protocols to the 1979 Geneva Convention

1) EMEP

In fact, the first protocol to the Geneva Convention was that concluded in 1984, which required mandatory contributions by ECE member countries to finance EMEP. Therefore, EMEP had been financed by voluntary contributions only.

2) The 1985 sulphur protocol

The realization that more stringent control measures were necessary led to the conclusion in Helsinki in 1985 of the protocol on the Reduction of Sulphur Emissions or their transboundary fluxes by at least 30%.

The protocol's **key requirement** is contained in Article 2, which provides that the parties are to "reduce their national annual sulphur emission," by at least 30% as soon as possible and the latest by 1993, using 1980 level as the basis for calculations of reduction."

Evaluation

The sulphur protocol goes much further than the Convention in that it lays down a specific requirement - namely, that parties shall reduce their sulphur emissions by 30% from 1980 levels by 1993. Parties are free to determine for themselves **how** to achieve this 30% reduction.

Less clear is why 30% was chosen and why 1980 was selected as the base year. Many parties recognized that much larger reductions would be necessary to achieve an acceptable level of deposition as to the base year of 1980. Two observations are called for:

First, the emissions of many ECE countries had already dropped considerably from 1980 levels by 1985 when the protocol was entered into, and

Secondly, some countries, notably the UK and the US, protested that in view of the considerable reduction in their SO₂ emissions **before** 1980, using 1980 as the base year failed to give them credit for their earlier reductions. Countries argued that a higher percentage reduction, say 40%, from their year of peak emissions, would have them more equitable.

Despite these problems, the sulphur protocol is a major step forward in that it "constitutes a legal bar against reversal of the SO₂ emission trend" in the event that economic conditions should tempt countries to increase their emissions.

Of course, the success of an agreement of this kind is determined in part by the number and nature of the parties to it. The fact that a **flat** 30% rate was used means that less developed countries, which produce less emissions, must still reduce their emission levels, even though they would be producing far less SO₂ with **no** reduction than a developed country that had reduced its emissions by 30%.

These difficulties with approach of the sulphur protocol raise the question of alternative strategies for the control of air pollution.

Alternative Approaches

At least three different approaches to controlling air pollution can be identified, in addition to the flat-rate percentage reduction approach of the sulphur protocol:

- a) The "ambient air quality standards" approach used in countries such as the US. This method establishes maximum allowable concentrations of a given pollutant in the atmosphere, and sets emission limits for different sources so these concentrations are not exceeded.

A recent refinement of this approach allows sources to market or trade their **unused** pollution rights to sources that would otherwise exceed their limits;

- b) An approach employing **technology-based emission standards** is used in countries such as Germany and Sweden. This approach entails the use of the **best available technology** for controlling air pollution;
- c) An approach involving a determination of **how much pollutes** the environment can tolerate is employed in the Netherlands. This so-called "critical load" approach focus on protection of the environment - in contrast to a flat-rate or best-available technology approach - and may mean that a source in one region can emit more pollution than a source in another region.

Of the various approaches, the critical load approach has been recognized as having superior merit, since it addresses the real problem. For this reason, the sulphur protocol is being redrafted to incorporate this approach. This change in policy is no doubt due, at least in part, to the fact that this same approach was introduced in the 1988 protocol to the Geneva Convention.

3) The NOx Protocol

A) The Protocol on the Control of Nitrogen Oxide Emissions or their Transboundary Fluxes was concluded in Sofia on November 1, 1988, and entered into force February 14, 1991.

The Sofia Protocol addresses the increasing serious problem of damage to vital elements of the environment from acid deposition due to NOx emissions. These emissions come mainly from combustion of fossil fuels, both by motor vehicles and stationary sources.

B) As already indicated, the NOx protocol introduces an innovative, "critical load" approach to the control of nitrous oxide emissions".

Article 1(7) of the protocol defines this concept as "a quantitative estimate of the exposure to one or more pollutants **below** which significant harmful do **not** occur according to present knowledge."

States are to cooperate to establish these critical loads under Article 3(3).

c) But in the meantime, the protocol only requires the parties to freeze their NOx emissions at 1987 levels or to reduce from to that level by the end 1994.

This freeze was less than that many countries had wanted. Indeed, 12 of the 25 signatories made an additional commitment to reduce their NOx emissions by 30%. Environmental groups called for a 75% reduction over the next 10 years.

But in view of the fact that the majority of NOx emissions comes from mobile sources in many countries, and the fact that reduction of NOx emissions will therefore require reduced use of motor vehicles, *inter alia*, control of NOx emissions is especially difficult. But the introduction of the critical load concept holds promise, since it is not as blunt an instrument as a float-rate reduction or a freeze.

4) The VOC protocol (18 Nov. 1991.)

D. Overall assessment of the ECE acid deposition regime

The 1979 Geneva Convention established a process which has borne considerable fruit. The SO2 Protocol was the first agreement requiring **reduction** of air pollution, and the current trend has moved past percentage reductions and freezes to the use of critical loads.

E. 1991 VOC Protocol

Its main feature is **flexibility**. It provides for:

- Options for selection of the base year;
- Options for the designation of particular areas within a country in which reduction obligations will apply;
- Options for countries with very low emissions to freeze emissions without reducing them.

The Protocol motivated by a consensus (see at Preambular para. page. 50) of **critical levels** of pollution (see final preambular para, page 51, and art. 7(b), page 55).

F. Principles of general international law concerning TFP and their relation to the ECE regime

1) Principle 21 Stockholm Declaration

States have 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.

The same principle was adopted as Principle 2 of the Rio Declaration, with addition of words "and developmental" to modify "policies."

2) These principles are based generally upon the 1941 award in the **Trail Smelter** arbitration between the Us and Canada, and on the maximum, *sic uter, tuo, ut aleenium non laedas*.

3) If these authorities, taken together, can be said to embody a general principle of customary international law (and there's little dispute that they can), should the European practices regarding acid **rain** be regarded as a **departure** from that general principle?

This a very complex, and somewhat theoretical, problem. But it does appear that the States participating in the ECE acid regime, even the net **importers** of pollution, have, in effect, agreed to tolerate some measure of harm, **so long** as the States responsible for that harm are exercising **due diligence** to reduce and control that pollution. In the context of the ECE regime, the major pollution exporters appear to be doing just that, albeit not always as quickly as might be wished.

1.3. BIBLIOGRAPHY OF SELECTED TRAINING MATERIALS: TRANSBOUNDARY AIR POLLUTION

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MODULE 2
NATIONAL LEGISLATION AND INSTITUTIONS

(7 - 10 December 1993)

- A. The role of legislation in environmental management for sustainable development
- B. Institutions and linkages to environmental law and policy
- C. New directions in environmental legislation and institutions in the Latin American and the Caribbean Region
- D. Legal aspects of environmental planning
- E. Legal techniques to achieve sustainable development
- F. Economic implications of environmental legislation
- G. Legal aspects of environmental management of human settlement
- H. Land Management Law
- I. Legal aspects of solid waste management
- J. Legal and institutional aspects of environmental impact assessment
- K. Legal/Institutional aspects of strategies for integrating environment/development planning in EIA

A.1. THE ROLE OF NATIONAL LEGISLATION IN ENVIRONMENTAL MANAGEMENT FOR SUSTAINABLE DEVELOPMENT

Presented by:
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Framework Convention on Climate Change (INC/FCCC)

Environmental laws, provided they are enacted with sufficient regard for cultural differences and social and economic realities, are important tools for giving effects to policies needed for sustainable development. They protect and encourage the law-abiding and guide citizens on the actions they should take. The importance of law in regulating societies cannot be overemphasized. Laws are needed if there is to be order in society. Law has been defined in so many ways, but for our purpose, we will use the following definition: "Law is the means used by society to induce individuals to behave in a certain way, under the threat of penalties that may even be applied coercively to the transgressor."

Environmental legislation has undergone considerable transformation since the Stockholm Conference of 1972. Under the influence of environmental groups and conservationists, governments began to take a serious look at the environment and the irreparable harm being done through human practices. Laws have since been passed creating rules as a result of the renewed conception of law and the environment. The environment is being looked at from holistic and systematic angles and this has given rise to laws that establish principles aimed at protecting the environment as a whole, taking all its components into account.

There are five types of environmental legislation: (a) Principle of environmental management that are found in constitutions of countries. These are often articulated in the terms of State's obligations to its citizens to safeguard the national environment; (b) comprehensive codes touching on all areas of the environment; (c) legislation enacted to protect specific areas or sectors of the environment or to safeguard it from the effects of certain activities; (d) legislation not enacted expressly for environmental purposes, but which to some extent regulates behaviour that has a significant influence on environmental protection; and (e) framework legislation that establishes a general framework for environmental management.

Sound environmental management requires the identification of a country's natural resources currently exploited, as well as activities which degrade the environment. In terms of currently exploited resources, it is necessary to determine whether the applicable legislation is designed to ensure that these resources are being exploited in a rational, efficient and cost-effective manner. In terms of human activities which impact adversely on the environment, it is necessary to determine whether applicable laws are capable of moderating such adverse impacts and, if not, to prescribe the formulation and application of programmes designed to protect and enhance the quality of the affected environment. Sustainable development requires the elaboration of sound environmental management measures. An important component should be the enhancement of the legislative infrastructure defining the parameters of permissible resource exploitation and utilization. This will involve either amendments to existing legislation or the enactment of new legislation, as well as detailed regulation to provide guidance the environmental managers and law enforcement authorities.

**A.1. PRESENTATION OUTLINE:
THE ROLE OF NATIONAL LEGISLATION IN ENVIRONMENTAL MANAGEMENT
FOR SUSTAINABLE DEVELOPMENT**

Presented by:
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A.1.1. Role of law in society

A.1.2. Evolution of environmental legislation

A.1.3. Developments since the industrial revolution

A.1.4. Focus of legislation during colonization

- i) Human health
- ii) Natural resources exploitation
- iii) Sectoral
- iv) Not conservation oriented

- a) Developments since Stockholm Conference of 1972
- b) Types of environmental legislation
 - i) Constitutional provisions
 - ii) Environmental codes
 - iii) Sectoral legislation
 - iv) Framework legislation
 - v) Other legislation impacting the environment

A.1.5. Development of environmental policy

- i) Identification of problem areas
- ii) Possible options for addressing issue
- iii) Proposed Actions

A.1.6. Areas for policy development

- i) Environmental impact assessment
- ii) Water resource management
- iii) Air
- iv) Soils
- v) Forests
- vi) Industrialization
- vii) Human settlement
- viii) Waste management
- ix) Hazardous and toxic wastes
- x) Land use planning

- xi) Wildlife conservation
- xii) Natural resources exploitation and conservation

A.1.7. Environmental management

- i) Institutional framework
- ii) Human resource development
- iii) Implementation (I) standards (II) incentives
- iv) Enforcement of regulation: sanctions
- v) Public and community participation

A.1.8 Sustainable development

Definition

- i) "Development that meets the needs of the present without compromising the ability of the future generations to meet their own needs." World Commission on Environment and Development (otherwise known as the Brundtland commission).
- ii) "Improving the quality of human life while living within the carrying capacity of supporting ecosystems." Caring for the earth - a strategy for sustainable living by UNEP, WWF, & IUCM.
- iii) Development that takes into account the social, economic, agricultural and the environmental implications; holistic approach to development.

A.1.9 Enforcement of legislation

- i) Why enforcement of environmental legislation has been weak in many countries.
- ii) Methods of enforcement
 - Command and control
 - Economic incentives, rebates etc.
 - Acceptable standards
 - Community involvement

A.1.10. Role of law beyond sanctions

- i) Framework for scientist and politician to interact
- ii) Facilitate community involvement in decision-making
- iii) Should stimulate technological development

COUNTRY PRESENTATION BY WESTERN SAMOA ON NATIONAL LEGISLATION FOR ENVIRONMENTAL MANAGEMENT

Pati K. Liu

Introduction

Western Samoa is situated in the South Pacific. It comprises two main islands and five smaller ones. It has a total land area of 2940 square kilometers. Its estimated population (1991) is 165,000. The land tenure/use system is roughly divided as follows:

Land Tenure

Customary	81%
Government	16%
Freehold	3%
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	100%

Land Use

Indigenous Forest	55%
Plantations	2%
Livestock	4%
Cropping	39%
---	---
	100%

The country has a Westminster/parliamentary style of government and achieved its independence in 1962.

Current Status of the Local Environment

In 1986, the total population was approximately 156,000 but by 1991, as the figures quoted demonstrate, there had been significant increases in the population. The projected annual population is expected to be in the vicinity of 1-2%. This is offset by an annual emigration rate of between 1.5-2%. The demographics of the country and the population statistics present three main concerns which can be listed as follows: (a) limited land resources; (b) depletion of natural resources; and (c) strain on the existing economic and social infrastructures.

Water Supply

About two-thirds of the population have access to water from treated sources. The remaining third rely on borewater and rainwater. There is some damage to existing water catchment areas, and this will have to be addressed.

Fisheries

Fisheries stocks are in constant decline due to increased demands. Overfishing is a problem. In addition, unsustainable fishery techniques using dynamite and poisons is commonplace. Modern, non-selective fishing methods have also contributed to diminishing fish stocks. Reclamation of land and drainage of coastal wetlands have seen the loss of some fish habitats, including breeding grounds.

Waste Management

More than 17,000 cubic meters (or 3,000 tons) of solid waste matter is generated annually. Because of the absence of proper public sewage systems, a large volume of this waste ends up in coastal mangrove systems. Pit latrines without proper septic systems are in common use. There appears to be sufficient lack of awareness about the need to dispose of industrial chemicals safely with the result that inadequate disposal systems for them exist.

Forestry

Although 37% of the total land area of the country is under forests, this is being continually affected by logging which promises, if unchecked, to substantially diminish current reserves. Deforestation is occurring at the rate of about 3,000 hectares a year.

Biodiversity

Western Samoa is characterized by varied biodiversity stocks and the country recognizes that its ecosystem forms a valuable heritage which requires preservation. Forest clearing has led to a degradation of natural ecosystems which have threatened birds, animals and plants. This has made recovery of some indigenous bird species under threat, somewhat difficult.

Climate Change and Greenhouse Gases

The major difficulty in this area has been the limited local response to the challenges issued by the problems of greenhouse gases and the resultant changes to climate which they cause. However, there is an increasing recognition of the importance of strengthening national capacities in this regard, caused in part by the fact that Western Samoa is an island nation, and therefore, more vulnerable to the effects of climate change. It is recognized that coastal inundation, shoreline retreat, frequent storms, and coastal sedimentation both individually and cumulatively, constitute threats to infrastructure and services.

Atmosphere/Ozone depletion

Again, the problem has been one of limited local response. In particular, there is an acceptance that carbon dioxide emissions from motor vehicles and industrial plants will have to be reduced and eliminated. It is intended that improvements in the standard of vehicles testing, alternative energy sourcing and the choice of appropriate petroleum products may go some way towards addressing these concerns.

Government Legislation and Policies

The Land and Environment Act of 1989 is one of the key statutes which deal with the environment. It is an umbrella legislation which addresses, *inter alia*, natural resources protection, environmental management and pollution control. As suggested by the long title to the Act, it seeks to establish national parks and other forms of protected areas. It covers 148 sections in all. Part VIII deals with conservation and environment. An Environment Board established under section 97 of the Act has, as its principal objective, the protection and conservation of the natural resources and the environment.

The Department of Land and Environment has a central role to play in environmental affairs. It is established under section 4 of the Act. Its principal functions are set out under section 95, and include advising the Minister on the potential impact of any public or private development proposal, giving advice on the procedures for the assessment and monitoring of environmental impact, and ensuring that effective provision is made for public participation in environmental planning.

Part VIII, Division 5 of the Act deals with the protection of the foreshore, and protection of coastal waters. Division 6 of Part VIII addresses the problem of pollution of seas and inland waters. Division 8 establishes regulatory controls over litter and establishes offenses for contravention of the Act.

Other legislation that relate to the environment are:

- * Taking of Land Act, 1964
- * The Water Act, 1965
- * Water Resources Act, 1985
- * Forest Act, 1967
- * Agriculture, Forests and Fisheries Ordinance, 1959
- * Fisheries Protection Act, 1972
- * Fish Dynamiting Act, 1972

Western Samoa has either signed (S) or ratified (R) the following Conventions: Convention on Biodiversity (S,R); Framework Convention on Climate Change (S); Vienna Convention and Montreal Protocol (R); Basel Convention (S,R). It is in the process of taking steps to sign or ratify other conventions including the Convention on Migratory Species and CITES. At the regional level, it is a party to the SPREP Convention.

COUNTRY PRESENTATION BY CHINA ON THE ROLE OF NATIONAL LEGISLATION ON ENVIRONMENTAL MANAGEMENT

Ying Zhao

The "Three-Simultaneity" System for Environment Management in China

Definition of "Three-Simultaneity" System

The so-called "three-simultaneity" system requires that in respect of industrial enterprises and projects related thereto, whether new or under refurbishment, pollution prevention facilities must be designed and built simultaneously with the main project. The system is an important requirement in preventing the occurrence of new pollution sources. It seeks to establish and implement the principle of prevention first, and represents an innovation in China's environmental protection response.

Formation and development

The system of "The three-simultaneity" is a relatively recent concept in China.

* In June 1972, in a Report on the pollution of Guanting Reservoir which was approved and transmitted by the State Council throughout the country, the State Planning Commission and the State Construction proposed the idea that the construction of factories should be carried out simultaneously with the construction of projects on the comprehensive utilization of waste water, solid waste and waste gas. This report which applied only to the construction of factories and comprehensive utilization of wastes formed the basis upon which contemporary efforts to establish the "Three Simultaneity System" was set up.

* In 1973 the State Council resolution approved and transmitted to the whole country, the regulation on the protection and improvement of the environment. This law provided that for all newly built, reconstructed and expanded enterprises, projects on pollution prevention control should be designed, constructed and put into operation simultaneously with the main projects. It also pointed out that the enterprises currently under construction which were not installing pollution control facilities, should immediately do so. Departments responsible for the projects at various levels should ensure that their design and construction were carried out after appropriate consultations with departments dealing with environmental protection. This law effectively enlarged the scope of the "three simultaneity" principle.

* In April 1977, the State Planning Commission, the State Construction Commission, the Ministry of Finance, the key players in environmental protection under the State Council, jointly issued the Regulation to comprehensive utilization of industrial waste water, waste gas and solid wastes. Its objective is, *inter alia*, to prevent new pollution. Newly built, reconstructed and expanded projects and those undergoing technical transmission were required to strictly observe laws relating to environmental protection, including the "three simultaneity principle." Failure to do so would result in project approval being denied. Projects already under construction without pollution control facilities were required to take remedial measures to ensure compliance with law. Enterprises undergoing modification, expansion or technical transformation were required to take measures to solve old pollution problems related to the project. The laws relating to three simultaneities became a precursor to the environment protection law. This extended the scope of the application of three-simultaneity to projects of technical transformation. Departments of environmental protection at various levels were given management responsibility over the system of three simultaneity.

* In March 1986, the Environmental Protection Commission under the State Council, and the State Economic Commission, jointly released the Administrative Rule for environmental protection of construction projects which effectively was a revised version of the original guideline. This is a fundamental and critical law. It provides the mechanisms and procedures for project examination and approval. It also allocates the division of powers for the supervision of projects between relevant government departments. In Article 6, it provides that the administrative authorities at all levels in planning, land management, capital construction, technical renovation, bank, material, industry and commerce should integrate environmental protection of construction projects to their work plans on the basis of these guidelines. For those projects whose environmental impact statement or form is not approved, the planning department will not approve the project assignment study. In consequence of this, the land management department will not go through the formalities for approving the use of the land. For projects whose environmental protection chapter in the preliminary design has not been examined and approved by the environmental protection department, the department concerned will not supply material and equipment. For projects that have not obtained a certificate of acceptance for environmental protection facilities, the industrial and commercial administrative authorities will not issue a certificate of operation.

* The stipulation on "three-simultaneity" in the environmental protection law: The environmental protection law has summarized the experience in the implementation of "three-simultaneity" in China. It provides that installations for the prevention and control of pollution at a construction project must be designed, built and commissioned together with the principal part of the project. No permission shall be given for a construction project to be commissioned or used, until its installation for the prevention and control of pollution are examined and assessed as having met the requisite legal standards of the competent department of environmental protection. Examination and approval of the environmental impact statement would also be required. Installations for the prevention and control of pollution shall not be dismantled or left idle without authorization. If it is necessary to dismantle such installations or leave them idle, prior approval is to be obtained from the competent department of environmental protection administration in the locality.

Major Contents of "Three Simultaneity" System

*** In the stages of designing**

A brief statement should be made on the environmental impact of a project. At the feasibility stage, a special statement and report is required on environmental protection, including the environmental implications of the project, major pollution sources and pollution, possible ecological changes that the exploration of resources might bring about, an initial plan on controlling pollution, estimates of environmental protection investment, and planned environmental standards. The initial design must make specific provision for environmental protection. It must include design basis, main sources, pollutants and its emissive types, adopting environmental standards, facilities, echnocourse, prevention of ecological changes and investment. The design of working drawings is dependent upon the ratified documents of environmental protection chapter.

*** In the stage of construction**

Environmental protection facilities are required by law to be constructed at the same time as the projects. In the process of construction, the surrounding environment should be protected to prevent unnecessary damage to the natural environment and measures should be taken to prevent and reduce pollution and damage to the living environment caused by dust, noise and vibration. While the project is still being constructed, departments of environmental protection can conduct on-the-spot examinations. Construction units must provide the necessary information required by government inspectors.

* **In the stage of putting into operation**

Before the project is formally put into operation or use, the construction unit should submit a report on completion and acceptance of environmental protection facilities to departments of environmental protection responsible for examination and approval, stating their situation of operation, effect of pollution control, and standards reached. The facilities can only be put into operation or use if they have passed the examination, and issued a certificate for the examination and acceptance of environmental protection facilities.

* **Responsibilities of relevant departments**

The competent departments of environmental protection administration are responsible for the supervision and management of environmental protection of the project: checking the contents related to environmental protection in project assignment (feasibility study report) and economic contracts; examining and approving the environmental impact statement or environmental impact form; reviewing the chapter on environmental protection in initial design; checking on the construction of the project; checking and accepting the environmental protection facilities, upon completion and examining and supervising the operation and use of these facilities.

The competent departments responsible for the construction projects are responsible for the preliminary review of the environmental impact statement or environmental impact form, the environmental protection chapter in the initial design and completion and acceptance report of the environmental protection facilities for the supervision of implementation of environmental protection measures in the design and construction, for the protection measures in the design and construction and for the supervision of the normal operation of environmental protection facilities after the completion of the projects.

Construction units are responsible for submitting the environmental impact statement or form, the implementation of environmental protection measures and the normal operation of pollution-control facilities after the completion of the projects.

* **Offenses**

Construction units and persons that violate the "three-simultaneity" system will be fined. If the environmental protection facilities are put into operation without examination and acceptance or without passing the examination, investigation will be made to identify the units and persons concerned. This could result in the laying of charges against offenders.

Implementation

* Although China promulgated certain laws on "three-simultaneity" in the 1970s, the system was not well implemented. Less than 20 percent of the large or medium-sized projects implemented this principle. As a result, many new pollution sources were brought about. There were two reasons for this situation:

- The system was still not perfect; and
- The environment protection agencies were not perfect and their role in the supervision and administration was not brought into full play.

* To ensure more effective implementation of the "three-simultaneity" system, China issued a series of administrative orders and regulations in the 1980s. The implementation rate of "three-simultaneity" was raised from 39 percent in 1979 to 79 percent in 1984, and in some provinces it was raised to as high as 90 percent. With the strengthening of environmental management, there are more and more factories,

enterprises and institutions that are abiding by the system. In 1988, nearly all the large- and medium-sized projects implemented the system, and around 80 percent of the small projects did so. From 1985 to 1987, because of the implementation of the "three-simultaneity" system by large and medium-sized projects, the capacity of waste water treatment increased by 2.34 million tons daily, the capacity waste gas treatment by 94.59 million cubic meters per hour, and capacity of solid waste treatment by 7.73 million tons annually.

Case Study

The system of "three-simultaneity" is an important tool for strengthening environmental management of construction projects in China. Gujiao Mine in Shanxi province is a key project of the State. During its construction, no measures were taken to follow the regulation of "three-simultaneity," though the design contained the pollution control measures under the urge of provincial leaders and inspection of environmental protection departments. In October 1984, the main project was completed and was going to be put into operation. The Taiyuan municipal government and the city's environmental protection department insisted that the system of "three simultaneity" must be implemented immediately, and the project was not allowed to be in operation before the environmental protection facilities were constructed. Under the People's Congress and the government, the construction headquarters of Gujiao Mine took urgent measures and completed the construction of environmental protection facilities on time. This case was hailed as "Gujiao Spirit" at the Second National Conference of Environmental Protection and had a great impact across the country.

NATIONAL LEGISLATION AND INSTITUTIONS

A.1. FRAMEWORK LEGISLATIONS

AFRICA

Algeria	:	Loi No. 83-03 du 5 fevrier 1983 relative a la protection de l'environnement.
Congo	:	Loi No. 003/91 du 23 avril 1991 sur la protection de l'environnement.
Ghana	:	Environmental Protection Council Decree of 1974.
Nigeria	:	Federal Environmental Protection Agency Decree 1988.
The Gambia	:	National Environmental Management Act, 1988.
Zambia	:	Environmental Protection and Pollution Control Act. 1990.

ASIA

India	:	The Environmental (Protection) Act, 1986 (with rules and corrigendum).
Malaysia	:	Environmental Quality Act 1974.
Philippines	:	Philippine Environmental Policy of 1974, Philippine Environmental Code of 1974.
Sri Lanka	:	National Environmental Act No. 47 of 1980.
Thailand	:	Enhancement and Conservation of National Environmental Quality Act, B.E.2535, 1992.
Turkey	:	The Environment Law, 1983.

EUROPE

Bulgaria	:	Environmental Protection Act, 1991 (as amended 1992).
Malta	:	Act No. V of 1991. An Act to Protect the Environment.
United Kingdom	:	Environmental Protection Act of 1990 (excerpt).

LATIN-AMERICA

Colombia	:	Decreto No. 2811 del 18 de diciembre 1974.Codigo Nacional de Recursos Naturales Renovables y de Protection al Medio Ambiente.
Jamaica	:	The Natural Resources Conservation Authority Act 1991.

Mexico : Ley General del Equilibrio Ecologico y la Protection al ambiente del 28 de enero de 1988. (General Law of Ecological Equilibrium and Environmental Protection of 1988)

NORTH AMERICA

Canada : Canadian Environmental Protection Act (1988)

Quebec : Environmental Quality Act (1991)

A.3.2. LEGISLATION ON WATER MANAGEMENT

Algeria : Law No. 83.17 of 16 July 1983 promulgating the Water Code. (excerpt)

Kenya : The Water Act

Malaysia : Environmental quality (sewage and industrial effluents) regulations, 1979.

A.2. ENVIRONMENTAL INSTITUTIONS

Presented by:

Dr. Lothar Gundling, IUCN ELC, Bonn, Germany

The Panel statement presented the various options to establish environmental institutions and discussed the experience under these systems. Particular emphasis was laid on the problem of coordination which has two aspects: coordination within and between environmental institutions, and coordination between environmental institutions and other governmental units (line ministries).

B.1. INSTITUTIONS AND LINKAGES TO ENVIRONMENTAL LAW AND POLICY

The Structure and Functions of Environmental Institutions

Presented by:

Mr. S. Osafo

Legal Adviser, Secretariat of the INC/FCCC, Geneva

Since the 1972 Stockholm Conference, environmental institutions have been established in over 155 countries. There has been a rapid growth compared with the period before 1971 (only 11 countries). The types of these institutions differ from country to country. Some governments have established ministries and entrusted them with responsibility for environmental matters. The advantages of establishing a ministry are: (a) political visibility; (b) equality with other ministries; and (c) financial stability. The second type of institutions established are the agencies, commissions, the councils and boards created by Acts of Parliament and placed under the office of the President, Prime Minister or a Ministry. Their advantages are (a) reduced emphasis on politics; and (b) fairly high degree of independence. The disadvantages are: less political clout, inadequate funding and scientific and research oriented. Thirdly, we can mention the committees and secretariats established within ministries. They tend to be weak and have less influence. Others are environmental units established within each ministry or department, but these are characterized unfortunately by lack of coordination. The composition of councils, agencies, bodies, etc., but usually there are representatives from relevant ministries and departments, scientific bodies and institutions, general public interest/private sector (industry) and the non-governmental organizations.

The functioning of environmental institutions may include the following:

1. Policy-making: identification of problem areas; promotion of public/community participation in proposed governmental action including legislation.
2. Coordination: the cross-sectoral and multi-disciplinary nature of environmental issues require coordination of activities of several ministries; recognition that environment department or ministry cannot do everything and that other institutions have a role to play.
3. Rule making: initiating legislation, setting of standards and adopting laws and regulations.
4. Enforcement: licensing/permits; environmental impact assessment; inspection and power to prosecute.
5. Monitoring and assessment: monitoring of pollution by establishing the standards; effectiveness of implementations; monitoring state of environmental and research activities.
6. Education and information: public awareness; dissemination of information.
7. Advisory body to government on environmental matters.
8. Promoting international cooperation.

B.1. PRESENTATION OUTLINE:

INSTITUTIONS AND LINKAGES TO ENVIRONMENTAL LAW AND POLICY

The Structure and Functions of Environmental Institutions

Presented by:
Mr. S. Osafo
Legal Adviser

Secretariat of the Intergovernmental Negotiating Committee
for a Framework Convention on Climate Change (INC/FCCC)

B.1.1. Post-Stockholm developments

Environmental institutions established in over 155 countries - rapid growth from 11 in 1971.

B.1.2. Types of institutions

These differ from country to country with each country adopting the type of institution best suited to its needs.

(A) Ministries

- i) Ministry of Environment - Ministry created to handle environmental matters.
- ii) Ministry of and environment. This involves the Ministry of Environment being combined with another ministry whose activity is closely related to the environment.
- iii) Ministry of This is a Ministry with responsibility for the environment, but does not have the word environment in its title.

Advantages

- i) Political visibility
- ii) On par with other ministries
- iii) Financial stability

(B) Agencies commission, councils and boards

- Established by an Act of Parliament
- Places under the office of the President, Prime Minister or Ministry

Advantages

- i) Reduced emphasis on politics
- ii) Fairly independent
- iii) Staffing

- (C) Rule making
 - Initiating legislation
 - Setting of standards
 - By laws and regulations
- (D) Enforcement
 - Licensing/permits
 - Environmental impact assessment
 - Inspection
 - Power to prosecute
- (E) Monitoring and assessment
 - Monitoring of pollution/standards
 - Effectiveness of implementation
 - Monitoring state of environment
 - Research activities
- (F) Education and information
 - Public awareness
 - Dissemination
 - Formal and informal information
- (G) Advisory body to government on environmental matters
- (H) International cooperation

C.1.THE NEW DIRECTIONS ON ENVIRONMENTAL LEGISLATION IN THE LATIN AMERICAN AND THE CARIBBEAN REGION

Presented by:

Mr. R. Branes

UNEP Regional Office for Latin America and the Caribbean,
Mexico City

I. LATIN AMERICA AND THE CARIBBEAN: A REGION IN TROUBLE

Latin America and the Caribbean is a region in trouble. One of the gravest problems in the region is deforestation: Some 2 million square kilometers of forests have been cut down in the last 30 years. This represents an area larger than the Mexican territory. Deforestation influences the loss of biological diversity, soil erosion, alteration of hydrological cycles and even influences climate change. The loss of biological diversity is not only due to the species' habitat destruction, but it is also due to excessive exploitation of commercially valued species, to importing exotic species and to pollution itself. On the other hand, it is estimated that at this same time, 10% of the region's total area was subject to a moderate or grave desertification. Mining activities in the region originate a series of undesirable environmental effects. The same thing happens with the use of certain energy sources. The region's marine ecosystems also present a variety of problems, that are fundamentally the result of resources's mismanagement and pollution processes that are generated inland.

The constant segregation increase of the region's population, specially that of the rural population, has created an accelerated process of unplanned urban development. The region's urban population represented 68.8% from the region's total towards 1985. This fact has determined the surge of growing poverty belts whose population frequently lacks basic utilities and is exposed to severe pollution problems: as an example, close to 50 million persons in the region are exposed to dangerous levels of air pollution. In broader terms, it must be mentioned that 80% of the poor in Latin America and the Caribbean live in the more environmental vulnerable areas of the region.

II. THE ENVIRONMENTAL LEGISLATION IN THE REGION: ITS HISTORICAL DEVELOPMENT

Environmental legislation is the set of legal rules which regulate human behaviour that can influence, in a relevant way, the interaction processes that take place between living organisms and their environment systems through the generation of effects from which significant modifications in the organisms' living conditions can be expected. According to this definition, the concept of environmental legislation is really broad and includes:

- (a) True environmental legislation, which is made up by the legal codes enacted recently under an environment conception that visualizes it as a whole organized as a system.
- (b) Sectoral legislation of environmental relevance, which is integrated by the legal codes enacted in order to protect certain environmental components or to protect the environment from the effects of some activities.
- (c) The legislation of casual environmental relevance, which is structured by legal rules issued without a specific environmental purpose, but which regulates conduct that can significantly affect the protection of the environment.

The above mentioned distinction allows easier explanation of the historical development of the environmental legislation in our countries. In fact, during the 19th century, legislation of casual environmental relevance prevailed. We are referring to the great codes enacted in that century, as civil codes and others. However, as a consequence of colonial law and its tendency to regulate all aspects of social life, and also as a result of incipient industrialization in some countries of the region, policing or administrative or rural codes occasionally replaced the old colonial ordinances on certain matters, and some of them are still in effect. The 19th century can be viewed as a period in which environmental legislation was "casual" or "incidental," with some exceptions that were sectoral in nature. Environmental legislation in these same countries underwent a profound transformation in the early 20th century under the influence of "conservationist" ideas. At that time, natural resources laws began to be enacted, which established protection rules, particularly for water, soil, wildlife, etc.

The process of industrialization in some countries in the region was often accompanied by a process of urban growth and the general development of its societies. All the above generated the enactment of legal rules concerned with the effects on human health by the environment, such as public health legislation (environmental sanitation), labour legislation (working environment), legislation on human settlements (management of the urbanized environment, particularly protection of the environment from certain activities such as industry), etc.

The provisions that deal with these subjects are part of the sectoral legislation with environmental relevance that is still in force, and these provisions are the main components of legal systems for environmental protection in our region's countries.

However, in recent years, environmental legislation has begun to change around the world with "true environmental legislation." But these new laws have now completely replaced sectoral legislation with environmental relevance and these laws have not lessened in a sensitive way the influence of the casual environmental relevance legislation.

III. THE NEW DIRECTIONS: A SUMMARY OF THE TRENDS IN THE LAST TWENTY YEARS

The most important trend is the development of a true environmental legislation through:

- (a) The establishment of an appropriate constitutional framework (See the recent ten constitutions enacted in Latin America and the Caribbean: from the 1972 Panama Constitution to the 1993 Paraguay Constitution);
- (b) The enactment of comprehensive legislation on the environment (See the 1974 Colombian National Code on Renewable Natural Resources and the Environment Protection to the 1993 Honduran General Act on the Environment);
- (c) A growing participation, but still not sufficient, in the creation and enforcement of international law on environmental matters (Treaties and other international agreements);
- (d) The development of secondary legislation, such as certain regulations and technical norms;
- (e) A tendency to decentralize the power to legislate where that power has been concentrated in the hands of central governments. However, the sectoral legislation of environmental relevance and the legislation of casual environmental relevance continue to play an important role or

influence in the environmental legislation as a whole. There is not a serious effort to review and harmonize the sectoral legislation of environmental relevance, even when true environmental legislation starts to be enacted. And neither is there serious effort to establish a special system to protect the environmental interests and other collective and diffuse interests different from what the general legal system establishes.

On the other hand, the environmental legislation in our region presents old and new efficiency and efficacy problems. Efficacy means the application degree of a legal form; efficiency means how suitable a norm is for meeting the need it was intended to cover. The distinction is very important because many efficacy problems are due to efficiency ones. The reasons for the inefficiency of a legal norm, which frequently determine its inefficacy, are: (i) the absence of rules that are necessary to regulate a given environmental situation, and (ii) when the rules do exist, the wrong approach that the legal norms take in treating a given situation.

The wrong approach that the legal rules take in the treatment of a given environmental situation, can be summarized as follows: (a) the environmental legislation may be inefficient because of the environmental dimension is insufficiently incorporated into the general legal system, particularly into the economic legislation; (b) the environmental legislation may be inefficient because it does not consider the specific problem in a scientific manner or, which is worse, it does not take into consideration the social issues linked to the environmental situations that it intends to correct; (c) the environmental legislation may be inefficient because it does not have the necessary mechanisms to enforce its provisions; and (d) the environmental legislation may be inefficient due to the fact that it is heterogenous from a structural point of view, in other words it is a legislation that, as a consequence of its historical development, over-regulates certain environmental matters, even in a contradictory way.

In regard to the efficiency problem of environmental legislation, the following basic hypothesis on inefficacy can be mentioned; (a) people do not satisfactorily value the role of the environmental legislation and often even ignore its existence; and (b) the institutions responsible for administrative and judicial enforcement of environmental legislation are full of deficiencies.

IV. Proposals

- 1) It is necessary to design a national policy for environmental protection and, as a part of it, a legislative policy for environmental protection that must be carefully programmed.
- 2) This legislative policy must include, for the countries that have not done it, the necessary constitutional reforms and the enactment of a General law.
- 3) Based on this General Law, the sectoral legislation of environmental relevance must be harmonized and integrated. The legislation of casual environmental relevance must also be reviewed and those negative effects must be corrected through appropriate proposals.
- 4) Based on the previous mentioned General Law, a new environmental legislation must be developed, especially through enacting regulations and technical norms which are both indispensable for the enforcement of the environmental legislation.
- 5) Finally, when designing the legislative policy for environmental protection, special attention must be paid to the efficiency and efficacy problems that might arise from the new environmental legislation.

**C.I. PRESENTATION OUTLINE (PART 1):
NEW DIRECTIONS ON ENVIRONMENTAL LEGISLATION AND
INSTITUTIONS IN THE LATIN AMERICAN AND THE CARIBBEAN REGION**

Environmental Institutions

Presented by:

Mr. R. Branes

UNEP Regional Office for Latin America and the Caribbean
Mexico City

- C.1.1 The incorporation of environmental management into government responsibilities. The fundamental principles
- C.1.2 Umbrella agencies for the environmental management
- C.1.3 Sectoral agencies: Protection of the natural resources
- C.1.4 Sectoral agencies: Management of the man-made environment
- C.1.5 Sectoral agencies: Environmental sanitation
- C.1.6 Local environment management
- C.1.7 Citizen participation
- C.1.8 The response capacity from the environmental administration: An assessment

**C.I. PRESENTATION OUTLINE (PART 2):
NEW DIRECTIONS ON ENVIRONMENTAL LEGISLATION AND
INSTITUTIONS IN THE LATIN AMERICAN AND THE CARIBBEAN REGION**

Environmental Legislation

Presented by:

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Mexico City

C.1.1 The Latin American and the Caribbean region: A presentation

C.1.2 The development of a true environmental legislation through:

- (a) The establishment of an appropriate constitutional framework
- (b) The enactment of comprehensive legislation on the environment (General Laws or Codes)
- (c) A growing participation, but still not sufficient, in the creation and enforcement of international law on environmental matters (treaties and other international agreements)
- (d) The development of "secondary" legislation, such as certain "regulations" and "technical norms"
- (e) A tendency to decentralize the power to legislate

C.1.3 The sectoral legislation of environmental relevances and the legislation of casual environmental relevance and the legislation of casual environmental relevance, however, continue to play an important role or influence in the environmental legislation as a whole.

C.1.4 The permanence of old and new efficiency and efficacy problems

D.1. LEGAL ASPECTS OF ENVIRONMENTAL PLANNING

By Dr. Lothar GUNDLING
IUCN ELC
Bonn, Germany

The paper first highlighted the importance of environmental planning. It then discussed the various forms of environmental planning and the types of plans. Major legal issues of drafting planning laws were raised, such as: should a duty to plan be provided? Which legal nature should be given to the various types of environmental plans? How can integration of environmental and developmental planning be ensured? How can the public most effectively be involved?

**D.1 PRESENTATION OUTLINE:
LEGAL ASPECTS OF ENVIRONMENTAL PLANNING**

Presented by:
Mr. L. Gundling
Project Coordinator
Environmental Law Centre, IUCN

D.1.1 A concept of environmental planning

- (a) Develop environmental plans
 - (i) Overall and comprehensive levels
 - (ii) Sectoral approach
- (b) Participatory process
 - (i) At governmental level
 - (ii) Involving the public
- (c) Integration in development planning

D.1.2 Legal issues of environmental planning

- (a) Legal duty to plan?
- (b) Definition of plans
- (c) Principles of planning
 - (i) Identification of basic objectives
 - (ii) Identification of competent and responsible levels of Government or institutions
- (d) Planning procedures
 - (i) Options
 - Environmental framework law
 - Sectoral environmental laws
 - Administrative procedure Act
 - (ii) Consultative process
 - (iii) Participatory process
- (e) Legal nature of plans to be decided
 - (i) Binding
 - (ii) Non-binding
 - (iii) Combination of both

(f) Integration in development planning

- (i) Binding if plan is legal instrument
- (ii) To be taken into account
- (iii) Conflict resolution: Priority for environment?

LEGAL ASPECTS OF ENVIRONMENTAL PLANNING

by Lothar Gundling
IUCN Environmental Law Centre
Bonn, Germany

ABSTRACT/SUMMARY

Planning is a tool of environmental policy used in many countries; it is far from being outdated. In a number of countries, overall and comprehensive environmental plans are currently being prepared; they may be prepared either at national or regional level. In addition to these comprehensive plans, sectoral environmental plans (water resources, waste management, forestry, protected areas, air pollution control, etc.) at all governmental levels may be developed. It is essential that plans, whatever their scope, are prepared in an open and participatory process involving all interested and concerned governmental and non-governmental institutions. Procedures, however, may be different with respect to the various types of plans for governmental levels, where plans are prepared.

Another basic requirement for effective environmental planning is the integration of environmental plans in development planning. Even the best conservation plan may be useless if it is not respected in decision-making procedures. On the other hand, environmental planning should be realistic, which implies that environmental planning should not ignore considerations of development. The secret of good planning probably is the wise balancing of environmental and developmental aspects.

Environmental planning involves many legal issues which have to be addressed in environmental laws, both general laws and sectoral laws. Law should decide the question of whether there is a legal duty to plan or whether there is governmental discretion; the answer may be different with regard to different types of plans. Planning principles and planning procedures should be harmonized, which implies that these aspects should be regulated in general (basic) laws. A basic issue concerns the legal nature of the plans; it is important that the laws decide on their normative quality (binding or non-binding; laws may differentiate as to different types of plans).

The law must decide on how environmental planning is integrated in development planning and it must address how conflicts are resolved. Countries in general do not provide that environmental planning is given priority; in most jurisdictions, planning authorities are required to consider and balance the various issues involved, leaving the final outcome of decisions to the discretion of the respective authorities. Planning decisions should, in principle, be subject to judicial review; it is, however, important to respect the discretion which may be given to authorities. This would restrict juridical reviews to procedural aspects.

E.1 LEGAL TECHNIQUES TO ACHIEVE SUSTAINABLE DEVELOPMENT

by:
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IUCN ELC
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The paper presented the various legal techniques to address environmental problems and discussed briefly their strengths and weaknesses. It dealt with the traditional command-and-control techniques, such as licenses, orders, restrictions and prohibitions, which have met with criticism in many countries. The paper also discussed the so-called "economic instruments" such as pollution charges and taxes, subsidies, tax exemptions, tax reductions, emission trading, awards and others. The paper concluded that all techniques have their proper role to play; no strategy to achieve sustainable development can rely on only one type of instrument. The traditional techniques need to be critically analyzed in the specific country context; however they cannot be substituted completely by market economy instruments. Economic incentives should be used to the extent possible, taking into account their interest limitations.

**E.1.1. PRESENTATION OUTLINE:
LEGAL TECHNIQUES TO ACHIEVE SUSTAINABLE DEVELOPMENT**

Command-and-control versus economic incentives

Presented by:
Mr. L. Gundling
Project Coordinator
Environmental Law Centre, IUCN

E.1.1. Traditional approaches to regulation: Command and Control

- (a) Laws and regulations
 - (i) Orders
 - (ii) Prohibitions
 - (iii) Standards
- (b) Monitoring compliance
- (c) Licensing (EIA)
- (d) Planning
- (e) Advantage and critic

E.1.2 Economic incentives

- (a) Trade in Permits
 - (i) Concept
 - (ii) Argument
 - (iii) Critique
 - (iv) Condition
 - (v) Practice
- (b) Compensation
 - (i) Concept
 - (ii) Advantage
 - (iii) Condition
 - (iv) Practice
- (c) Pollution charges
 - (i) Concept
 - (ii) Advantage
 - (iii) Basic condition
 - (iv) Application
 - (v) Fund collects money
 - (vi) Practice

(d) Subsidies

- (i) Concept
- (ii) Condition
- (iii) Problem: "community pays" versus "polluter-pays"

(e) Tax exemptions and reductions

- (i) Concept
- (ii) Condition
- (iii) Problem
- (iv) Practice

E.1.3 Responsibility and liability

(a) Concepts

- (i) Negligence and fault
- (ii) Strict liability

(b) Prevention effect of responsibility and liability

(c) Problems

- (i) Quantification of damage
- (ii) Causation
- (iii) Damage widespread

(d) Feasible

(e) Funds a solution?

LEGAL TECHNIQUES TO ACHIEVE SUSTAINABLE DEVELOPMENT:

Command- and - Control versus Economic Incentives

by:

Lothar Gundling
IUCN Environmental Law Centre
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Abstract/Summary

Traditionally, environmental policy used command-and-control strategies to achieve identified protection objectives. Law and regulations laid down prohibitions and/or restrictions and set standards for environmental quality or emissions. The laws and regulations were enforced through licensing or other control mechanisms and through procedures to monitor compliance with statutory requirements. Many countries have introduced planning and environmental impact assessment procedures to strengthen the preventative element of environmental policy.

Command-and-control strategies were often criticized as being too static and not flexible enough, and laying too heavy burden on governments. It has also been said that there were no incentives for business to develop cleaner technologies and products. The critique is, to some extent justified, although it has to be recognized that the traditional means for regulations had their advantages, too (clarify binding character of rules).

*Techniques to national problems with the national approach are the so-called "economic instruments" or "economic incentives," such as trade in permits or other compensation schemes, pollution charges, subsidies for the development of clean technologies and products, or tax exemption or reduction for environmentally friendly behavior. Trade in permits is much discussed but rarely used in practice, e.g. in the US. Views on its experience are divided; some feel it is to be considered a flexible instrument, while others are concerned about its effectiveness with regard to environmental protection. Pollution charges are widely used today; there is a consensus that they work only if charges are high enough to discourage from pollution. The effectiveness of incentives largely depends on how they are designed and how vigorously they are applied. Also, it is important to note that economic instruments cannot substitute regulations; they have to be applied in addition to regulations.

There are traditional techniques which are not command-and-control, such as responsibility and ability. These concepts are needed and have their specific merits. Again, they supplement regulations rather than substitute it. Responsibility and liability often raise enormous problems with regard to causation and quantification of damage. And there are clearly many areas where damage have to be prevented instead of being compensated later (if it is possible at all!). Some of the problems of responsibility and liability may be overcome through establishing environmental funds.

* Paragraph not clear on the original

**F.1 PRESENTATION OUTLINE:
ECONOMIC IMPLICATIONS OF ENVIRONMENTAL LEGISLATION**

Presented by:
Mr. Abaza
Chief, Environment & Economics Unit, UNEP

- F.1.1 The economic implication of environmental law and legislation - the economic rationale of environmental law
- F.1.2 Environmental law and economic Policy Instruments and E.I.A.
- F.1.3 The mix between environmental legislation and economic incentives
- F.1.4 Integrated approach for the introduction of legislation taking into account agricultural police, energy industry, environment, i.e. involvement of other ministries
- F.1.5 Public participation
- F.1.6 Role of public information - public awareness vis-vis legislation - market-based incentives
- F.1.7 Role of environmental law in promoting sustainable development
- F.1.8 Monitoring and compliance - separating monitoring from compliance - involving the public
- F.1.9 Technology development and legislation
- F.1.10 Linkage between international agreements and national policies
- F.1.11. Who pays the damage: operators of a facility - owner-producer (yearly)

**G.1. PRESENTATION OUTLINE:
LEGAL ASPECTS OF ENVIRONMENTAL MANAGEMENT
OF HUMAN SETTLEMENTS**

Presented by:
Mr. P. McAuslan
Professor of Law
University College, London

G.1.1 Introduction

- (a) The need for a conceptual framework of the roles of law
- (b) The 'Layering process' of the law
- (c) Law as part of the struggle

G.1.2 Law as Framework

- (a) Constitutions
- (b) Organic Laws
- (c) General Principles

G.1.3 Law as Facilitator

- (a) Credit
- (b) Regularization
- (c) Informal Economic Activity
- (d) Housing
- (e) Urban Agriculture
- (f) NGOs and CBOs

G.1.4 Law as Regulator

- (a) Privatised Municipal Services and Utilities
- (b) Urban Pollution; EIA

G.1.5 Law as Protector

- (a) Housing Rights
- (b) Redress of Grievances
- (c) Access to Justice

G.1.6 Conclusion

-Need for Environmental Management of Human Settlement Law to contain all four roles

LEGAL ASPECTS OF ENVIRONMENTAL MANAGEMENT OF HUMAN SETTLEMENTS

SYNOPSIS OF LECTURE

This lecture attempted to provide a conceptual framework for understanding the role of law in managing human settlements. At the outset, it is important to realize that we do not start off with a clean state; there exists a good deal of law on human settlements in all countries. What tends to happen is that a new law is introduced and is in effect put on top of the old law which often remains in existence, so we have a "layering" effect; different layers of law based on different philosophies and approaches exist at the same time, which makes for a confused legal framework for law.

There are five sub-categories of law involved in the management of human settlements. They are:

- i) law as framework
- ii) law as facilitator
- iii) law as regulator
- iv) law as mediator
- v) law as protector

1. Law as Framework. Law as framework draws attention to the role of law as setting out fundamental principles, rights and establishing the basic institutions and structures of society. Examples are constitutions, organic environmental laws and organic housing laws. The importance of this sub-category is that it draws attention to this general area of law and the need for citizens groups, NGOs, consultants and educators to focus on this area and not ignore it. Getting the legal right framework is important.

2. Law as Facilitator. Law as facilitator draws attention to all those areas of law which can be used or could be structured to assist activity — economic or social — in the urban sphere. This would include laws establishing and empowering neighborhood community associations, laws providing for credit for the urban poor and to facilitate access to, and security of, tenure of land; and laws to permit urban agriculture. Law can be and should be used to assist the activities of the urban poor.

3. Law as regulator. There is a role for law as regulator. In the past, there has been too much regulation and it has been targeted wrongly, too often at the activities of the urban poor. But with the advent of privatization of municipal services and facilities like refuse collection or the provision of water, there is a need for an appropriate regulatory regime for the privatized services and utilities to ensure that private monopolies do not exploit the consumer. Another area where regulation is needed is in respect of urban pollution.

4. Law as mediator. Law as mediator directs attention to the role of law in assisting groups and individuals in resolving disputes peaceably. All sorts of disputes arise between neighbors particularly where people come together in a city from many different backgrounds and law in the guise of what is now referred to as Alternative Dispute Resolution can be used to mediate between people and restore good relations. Law can also be used to mediate between disputing agencies within a city.

5. Law as protector. Law as protector refers to the role of law as the creator and enforcer of rights; rights to housing; to a clean environment; and also draws attention to the importance of providing an adequate system for the redress of grievances against public agencies and facilities to enable the citizenry to obtain access to justice, i.e. systems of legal and advice and a court system which is user-friendly.

HABITAT'S ROLE IN ENVIRONMENTAL MANAGEMENT

Presented by:
Mr. Hildebrand

I am going to address three topics with you this afternoon. The first will be to brief you on the work of the United Nations Centre for Human Settlements (Habitat); the second will be to address the topic I was asked to - Habitat's role in environmental management; and the third will be to introduce a proposed new land management programme which we are currently working on to address what I consider to be the most critical issue effecting the sustainable development of human settlements, land management, and to ask for your suggestions in the further development of this new programme.

Habitat has its roots in the post-war reconstruction and rehabilitation efforts of the United Nations, and this operational and pragmatic approach to addressing immediate needs of people continues to characterize Habitat's mission in the 1990s. In the aftermath of the Second World War, it was clearly understood that peace-building requires as a first essential step the rebuilding of shattered settlements and homes in order to house people and reconstruct political, economic, social and cultural life. This is equally true today.

The wave of decolonization which began to sweep through Asia and Africa in the late 1950s, and the subsequent proclamation of the First Development Decade of the United Nations, led the Economic and Social Council to establish the immediate institutional predecessors of Habitat and the Commission on Human Settlements.

Throughout the 1960s, unanticipated and unprecedented urban and population growth began to radically transform the demographic structure and spatial distribution of settlements in developing countries, a process which has continued to the present day. The social, economic and environmental consequences of this transformation - which will result in a majority of the developing world's population living in towns and cities within the course of a few generations were first raised at the 1972 United Nations Conference on the Human Environment in Stockholm. The Conference therefore recommended that the United Nations convene a conference to focus the attention of the international community on the extremely serious decline of human settlements, particularly in developing countries, as a result of demographic change and rapid urbanization.

Following recommendation and subsequent resolutions of the General Assembly, and cognizant of the fact that the conditions of human settlements largely determine the quality of life and the prospects for social and economic development, the United Nations convened Habitat: the United Nations Conference on Human Settlements in Vancouver in 1976. The most significant outcome of the conference was the recognition that human settlements was a new and important crosscutting issue of social and economic development. This was reflected in the Conference's recommendation for national and international action and in its call for greater and more intense cooperation, as well as for more effective institutional arrangements, in the field of human settlements.

On the institutional level, the direct outcome of the Conference was the establishment of the Commission on Human Settlements and the creation of the United Nations Centre for Human Settlements (Habitat) as the secretariat to service the commission and to act as the focal point for human settlements action and the coordination of human settlements activities within the United Nations system.

The global housing crisis, affecting hundreds of millions of families in both rural and urban settlements, and the social, economic and environmental impact of an unprecedented pace of urbanization in the less developed regions have defined the work of the centre since 1978.

Accordingly, the primary goals of the centre are (a) To see that member states adopt and implement housing strategies capable of moving the international community closer to the goals of adequate shelter for all; (b) to help governments formulate and execute sustainable urban development policies; (c) to strengthen the capacity of governments and communities to implement such housing and human settlements development policies.

Habitat addresses these goals by focussing on strengthening the capacity of central and local governments to develop policies and strategies that enable all the actors in the public and private sectors to improve shelter and settlement conditions, particularly those of the poor. To carry out this responsibility, the centre conducts human settlements research and development and disseminates the results world-wide by multimedia information and training programmes. Habitat is also committed to strengthening country capacity to monitor settlements conditions with policy-sensitive indicators and to undertake human settlements analysis and need assessments which result in policy and strategy options that are responsive to local conditions. Informed by a continuous policy dialogue at the country level, Habitat directs its technical cooperation activities to respond to specific requests from countries to strengthen their capacity to define and refine national policies and strategies, to develop action plans and to mobilize the human, technical and financial resources required for implementation.

Since its inception 15 years ago, Habitat has significantly increased its delivery of assistance to governments. Habitat currently has over 250 on-going technical cooperation programmes and projects with budgets totalling over \$180 million. The technical cooperation activities of Habitat are also the most highly leveraged of any UN agency with the framework of national investment programming. While Habitat serves as executing agency for less than 2% of UNDP's resources, over the last five years, Habitat projects have consistently resulted in national investment commitments ranging from US\$ 3 billion annually, or 20% of the total annual investment commitments related to all UNDP assisted projects.

Habitat is now producing well over 100 technical reports and publications during each two-year work programme cycle. In addition, the centre produces about 10 video productions each year, some of them award-winning, which enjoy wide circulation in developing countries. Habitat's training programme has evolved from its infant stages and now about one dozen training courses are carried out in Africa, Asia and Latin America in human settlements management each year.

The principal strategic initiative undertaken by Habitat to achieve its human settlements development objective is the Global Strategy for Shelter to the Year 2000, which was launched by the United Nations in 1988 and for which Habitat is the implementing agency.

The principal objective of the Strategy is to improve global shelter conditions by the creation of a legal, institutional and regulatory environment which can facilitate the construction and improvement of housing by all social groups, but especially by and for the poor. Drafted by Habitat, the Strategy pioneer the enabling approach, which, rather than emphasizing direct government intervention, favors legal and other incentives to encourage stakeholders outside the public sector to become engaged in housing and urban development.

The Centre has also taken the lead over the years in defining the policy response of the international community to the urbanization challenge in developing countries, beginning with its publication and dissemination of the New Agenda for Human Settlements in 1978. Habitat also worked closely with the UNCED secretariat in the preparation of the human settlements programmes of Agenda 21. Likewise, Habitat works closely with the Development Assistance Committee of the OECD in shaping donor policies on assistance to urban development.

In the implementation of all of its programmes and projects, Habitat is guided by the recognition of a number of key sectoral linkages, all of which illustrate how primary development objectives can be achieved through the improvement of human settlements conditions. These are the linkages between: (a) shelter development, employment generation and poverty alleviation; (b) shelter and environmental improvement and enhanced public health, (c) rural and urban development and economic growth; (d) participatory urban management and democratic reform, more effective governance and greater public accountability.

Looking towards the future, it is imperative to note that this is the decade of the single-largest increase in global population in human history: almost one thousand million people. More than 80% of that increase will take place in developing countries, and most of it will accrue to urban areas. Over the past year alone, the population in the less developed regions increased by 86 million; 56 million of that increase was urban. Over six hundred million more people will be living in cities and towns of the developing world by the year 2000, and at least 250 million of them will live in unsafe housing in shanty towns and slums without adequate water supply and sanitation. Already, at least 600 million people in urban centres in less developed regions live in life- and health-threatening environments. Urban poverty continues to increase at much faster rates than rural poverty.

All the foregoing trends and developments underscore the political, economic and social importance of human settlements management and development and the heightened relevance in future of a strengthened United Nations human settlements programme. The decision by the UN General Assembly at its 47th session to convene a second United Nations Conference on Human Settlements (Habitat II) in Istanbul in 1996 is a clear recognition of the need for new concerted action by the international community to address the issues of environmentally sustainable human settlements development in a rapidly urbanizing world. The expectation is that Habitat II will provide the directions and policy guidance for life and work on an urbanized planet in the 21st century and hopefully also lead to an enhanced and more effective human settlements programme for the United Nations.

With reference to the second part of my remarks concerning Habitat's role in environmental management, let me begin with the premise that has emerged from the deliberations of the last session of the Commission on Human Settlements: effective human settlements development and management is fundamental to the attainment of the overall goal of sustainable development. As I have already noted, in the next century, the overwhelming majority of the population of all countries, both developed and developing, will be living in towns and cities. Urban settlements, large or small, whether dependent on the agricultural economy or industry, will have to be the engines of growth and development. They will also have to be well managed if they are to be productive as well as protective of the environment through the efficient use of resources. In fact, the challenge of sustainable development will, in effect, be a human settlements challenge and it is in human settlements that this challenge will have to be met.

Further, rapid urbanization and growth of mega-cities in particular, have created immense and growing problems of air and water pollution, and degradation, traffic congestion and noise pollution. Moreover, it is in human settlements that most natural resources will be consumed. All of this argues the importance, and indeed the wisdom, of coordinated human settlements and environmental policy intervention in all countries and at all levels. The message from the UNCED process clearly was that it was precisely in the area of improving the living environment of their people that developing countries saw their immediate priorities. It is also incidentally in this interface, between the demand and needs of people in human settlements and sustainability demands of the larger natural environment that the greatest opportunity lies for maximizing Habitat/UNEP collaboration.

Allow me also to note here that this collaboration between UNEP, the agency responsible for the natural environment, and Habitat, the agency responsible for the built environment, has now taken-off in a wide range of areas including: urban environmental management, land and water resources management, as

well as energy and transportation management. Habitat and UNEP are currently involved in joint programming exercises in all developing country regions as well as in making joint contributions to various conferences and commissions including the Sustainable Development Commission.

Indeed I would like to focus my remarks concerning Habitat's role in environmental management on the preparations which we have been making, together with UNEP, for one of these conferences which is particularly illustrate - the Global Conference on the Sustainable Development of Small Island Developing States. You will be hearing further from Mr. Idrian later today regarding an example of some of our most strategic global work concerning Habitat's role in the environmental management of cities, and later in this course, on 9 December, from Prof. McAuslan, and a number of other Habitat colleagues, with specific illustrations of our work on the legal aspects of the environmental management of human settlements, so I won't try and summarize these programmes here. But, it is in small island developing States that the environment/settlements conflicts and potential synergies are brought into sharpest focus, for, on small islands, it is abundantly clear that it is the interaction between human settlements and the environments and the environment which determines whether sustainable development can be achieved.

Accordingly, Habitat's work with small island developing States is focused on how much pressing environmental issues as, for example, land resources management, the protection of fresh water resources and coastal zones, as well as settlements planning and management in disaster-prone areas, can best be achieved through improvements in the planning and management of human settlements. The broad substantive framework which guides these activities is clearly outlined in Chapter 7 of Agenda 21 under "promoting sustainable human settlements development." The Agenda is, in turn, translated into action through Habitat's technical cooperation activities. We have recently completed an overview of all of our ongoing technical cooperation activities with small island states and I learned something about our work which I didn't know before we did this overview. What the overview clearly illustrates is that, in our current portfolio of over 65 technical cooperation projects within 24 island states, the major focus of Habitat's work is on the need for effective and environmentally sensitive land use management. While I don't have time to go into details here, this work includes: (i) the drafting of legislation on land tenure and land use planning with explicit provisions for environmental protection areas and environmental impact assessments (incidentally one of the drafters of planning and development control legislation who we most frequently call upon is Prof. McAuslan); (ii) the development of awareness, techniques and capacity for environmental impact assessments; (iii) the development of efficient, equitable and transparent land tilling systems to ensure sustainable land resource management; (iv) land market assessments; (v) setting up geographic information systems (GIS) to monitor human settlements development and their environmental impacts; (vi) developing sustainable policies and preparation guidelines for waterfront development; and (vii) developing spatial strategies and land-use planning techniques to optimize the utilization of the limited land mass while avoiding negative environmental impacts.

This brings me to the importance of the final part of my remarks - our proposal and my request for your suggestions and inputs.

I am going to try and make the case to you for a new inter-agency programme - The Land Management and Programme, and in doing so, I would like to begin with a quote from S.R. Simpson's book on Land Law and Registration:

"Land is the source of all material wealth. From it we get everything that we use or value, whether it be food, clothing, fuel, shelter, metal or precious stones ... The availability of land is the key to human existence and its distribution and use are of vital importance."

The quotation succinctly sums up the central importance of land and its proper management in the affairs of nations. It leaves out however, one important element which must be addressed in any proposal for the development of a more concerted international effort to work with civil society and governments in strengthening land management.

The missing element is the political dimension, and it is this dimension which has, in the past, caused international agencies and many bilateral donors to shy away from tackling the land issue. The political dimension is the relationship between land and political and economic power; and the clear evidence that people and governments are prepared to use all available means, including force, to acquire and hold on land, precisely because it is the source of that power.

A reluctance to confront an issue does not mean that the issue fades away. It is, on the contrary, likely to get worse. Failure to recognize that the issue of land management is the key to making progress with the agendas of sustainable development and democratization will make much more difficult the realization of those agendas. What was once the reason for keeping clear of the land issue, now, with the new interlinked agendas of sustainable development and democratization, becomes the spur to take the issue on board.

The relationship between sustainable development and land management is recognized in Agenda 21, which provides the legal and administrative basis for this proposal. The relationship between democratization and land management is also obviously of critical importance.

There is a good deal of historical evidence to suggest that failure to develop appropriate national land policies and practices is a cause of political unrest up to and including armed civil strife e.g. Mexico, China, Kenya, Zimbabwe, to take just four twentieth century examples (see recent "Daily Nation" headline). Conversely, virtually all commentators who have studied the matter point to land reform in an egalitarian direction as providing an essential precondition for the rapid industrialization and economic development of Japan, South Korea and Taiwan since the end of the Second World War. National land policies founded on equity and efficiency seem therefore likely to contribute to political stability and economic growth, and their absence likely to contribute to the reverse.

One can go further. The processes of democratization around the world and over the last century appear to have gone hand in hand with the development of efficient and equitable systems of land management based on market principles, that is based on facilitating the access of ordinary people to land, and on providing them with security of tenure once they have obtained land. It is this security of people in their homes and, in agricultural communities in their livelihoods, that provides them with the independence to participate as free citizens in the political processes of their countries, and the resources to participate as economic actors in the economic and social development of their countries. In Africa, one can instance Botswana, in the Caribbean, Barbados and in Asia, Malaysia, as countries where democratization and wider access to and security of land are closely associated.

Thus, it is not enough for the international community to assist countries to hold elections, valuable and necessary though that is. The international community must go on and work with governments to tackle the manifold inefficiencies and inequities in land management, which, if left untouched, will undermine the nascent movement towards democratization.

There is an urgency about this. At this juncture of world history and global development, there are more countries having to face up to the need for fundamental reform of their land policies and practices than at any other time. All the countries within the Commonwealth of Independent States, all the countries of Eastern and Central Europe, the many countries in Africa and Asia moving from regimes of land nationalization or central control of land management to decentralized and private market-oriented land management systems and facing, too, the seemingly never-ending problem of refugees and their

settlement and resettlement, the countries of Central America emerging from civil war and last, but arguably most challenging of all, China and India, are all facing this challenge. With few exceptions, virtually all these countries are also facing the challenges of democratization and participation in programmes of development.

Turning now to sustainable development, Agenda 21 sets out in two separate chapters the connection between sustainable development and better land management.

First, in Chapter 7, on Promoting Sustainable Land Use Planning and Management, the broad objective being to provide for the land requirements of human settlement development through environmentally sound physical planning and land use so as to ensure access to land to all households; and secondly, in Chapter 10, on an Integrated Approach to the Planning and Management of Land Resources, the broad objective being to facilitate allocation of land to the uses that provide the greatest sustainable benefits and to promote the transition to a sustainable and integrated management of land resources.

While there are some differences of emphasis in the objectives of the two programme areas and consequently in the two sets of activities, there is, I believe, sufficient common ground for it to be feasible to propose an inter-agency global programme on land management.

Hitherto, such activities on land management that have been undertaken by international agencies have kept separate the urban and rural dimensions. This, in effect, replicates the position at national level where urban land management tends to be the preserve of Ministries of Local Government and/or Urban Development and rural land management the preserve of Ministries of Agriculture and/or Rural Development. Even the above quoted passages from Agenda 21 retain the division between urban and rural. There is, however, a strong case for a holistic approach to land and the development of an integrated approach to land management.

First, the point made in the paragraph of Agenda 21 which is cited above: "land resources are the basis for human living systems and provide soil, energy, water and the opportunity for all human activity". No distinction is made between rural and urban land, nor indeed is it sensible to do so. Increasing in practice, the border-line between rural and urban is breaking down.

Second, increasing attention is being paid to urban agriculture and the important source of employment and food it provides for low income city dwellers. The land use management issues to which this gives rise are not presently being adequately addressed at national levels because of the aforementioned national division between rural and urban land use.

Third, programmes of land settlement have too often in the past been seen in land management terms as principally involving rural land management issues with a focus on population movement and halting rural-urban migration.

Fourth, as cities in developing countries expand ever more rapidly, the problem (for such it is in many countries) of urban expansion on to agricultural and rural land will become ever more acute. There is a need for integrated approaches to solve this problem which is at the moment distinctly lacking in most countries.

Agenda 21 contains a mandate in Chapter 7 for an inter-agency programme as follows, and I quote:

At the international level, global coordination of land resource management activities should be strengthened by the various bilateral and multilateral agencies and programmes such as UNDP, FAO, the World Bank, the regional development banks, other interested organizations and the UNDP/World Bank/United Nations Centre for Human Settlements

(Habitat) Urban Management Programme, and action taken to promote the transfer of applicable experience on sustainable land-management practices to and among development countries (end of quote).

The community of international agencies dealing with land management issues would be open to severe and justifiable criticism, if faced with this clear directive to make available expertise and ideas to all countries without regard to institutional boundaries. They stood fast on their original mandate and engaged in isolated actions. The challenge is to address land management with an integrated approach, the concerned agencies will all benefit from working together for the benefit of all peoples in addressing that challenge.

While I don't intend to elaborate here on the modalities which we envisage for developing the programme, I would like to mention that it is Habitat's intention to explore launching a collaborative effort to this end with UNEP, FAO, UNDP and the World Bank. One of the first steps we will take will be to convene a high level meeting to discuss the development of this inter-agency land management programme in pursuance of the mandate in Agenda 21. In addition to the officials from the agencies likely to be involved in the programme, we will invite noted experts on land and leading officials from research and educational institutes specifically concerned with land issues, e.g. the Lincoln Institute of Land Policy together with professional associations (surveyors, etc.) and private sector interest groups and NGOs.

The meeting will be convened to discuss a draft programme of actions. In addition to the draft, however, the invitees will also be requested to prepare short presentations on aspects of the draft programme or other matters connected with land management which would help focus discussion and clarify issues.

The outcome of the meeting will be the establishment of a small working group to draft a Programme Document.

The content of the programme must, like the very existence of the programme, be justified by reference to Agenda 21; Chapter 7 and 10. An analysis of those Programme Areas indicates that the following are the common denominators between them:

- i) National Policy Formulation;
- ii) Development of appropriate planning and management systems and tools;
- iii) Review and develop appropriate legal regimes for land management;
- iv) L.I.S.
- v) Tenure and transactions issues;
- vi) Participatory approaches to land management;
- vii) Capacity-building including education, training and research;

These seven activity areas can in turn be brought together under three broad heads:

- i) Policy formulation [Activity Area (i)]
- ii) Mechanisms for implementation of policy [Activity Areas (ii) - (vi)]
- iii) Capacity-building (Activity Area (vii))

Allow me to end here by suggesting that if you as practitioners in environmental law have any questions or suggestions which you would like to make with regard to this proposed programme, I would welcome them either in the discussion after this session, or any other time during the course of your stay with us here in Nairobi.

SUSTAINABLE CITIES

Concept Implementation of a United Nations Programme

Abstract of Presentation by J. Eigen at
UNEP/UNITAR/UNCHS Training Programme in Environmental Law
and Policy
Nairobi, 29 November - 17 December 1993

Launched in 1990 by the United Nations Centre for Human Settlements and the United Nations Environment Programme, the **Sustainable Cities Programme (SCP)** is a major collaborative undertaking of the international community to advance urban environmental management. The aim is to provide municipal authorities and their partners in the public, private, and community sectors with an improved environmental planning and management capacity. Demonstration projects in more than ten urban centres around the world result in broad-based environmental strategies, priority technology transfer (including environmental law) and capital investment projects, and strengthened urban management capacities to mobilize all the public and private sector actors whose cooperation is required for managing sustainable urban development.

As a global programme, the SCP promotes the sharing of know-how among cities in different regions of the world. As an inter-organizational effort, the SCP mobilizes technical and financial resources from a variety of bi-lateral and multi-lateral sources. The SCP has gained significance also as a vehicle for inter-organizational collaboration: the Dar es Salaam demonstration alone has attracted some \$15 million in capacity-building resources from close to 20 international organizations; UNCED has cited the SCP as an effective instrument for implementing Agenda 21; vis-a-vis the UNDP and the World Bank, the SCP is the operational arm of the Urban Management Programme. The sustainable cities programme advances urban environmental management in three major areas:

- * Understanding of urban environment/development **issues and priorities** (this addresses the need to focus on strategies, important issues and to effectively resolve them — resulting strategies emphasize issues that cut across sectors, levels of government, space, and traditional time horizons; focus on problems that affect the urban poor; etc.);
- * Promotion of modern planning and **management approaches and techniques** (this addresses the need to mobilize, coordinate and more effectively apply local technical, institutional, and financial resources — it involves strategies for broad-based participatory approaches to problem identification, strategy formulation, and strategy implementation; for applying the full range of instruments available for implementing development strategies, etc.); and
- * Application of efficient **delivery mechanisms** for technology transfer, technical cooperation, and capacity-building (this addresses the need to leverage limited resources available for external support — it involves strategies for regionalizing support capacities; for 'bottom-up' and 'system-wide' capacity-building, for complementary support at technical/operational, administrative/managerial, and political levels; for demonstration-replication strategies for TCDC; for inter-agency cooperation arrangements, etc.).

LAND MANAGEMENT

SYNOPSIS OF LECTURE

There are five key issues to be addressed as a preliminary to developing a more appropriate legal framework for urban land management. They are:

- (i) Attitude of land. These are embedded in the culture of the people and cannot be disregarded by reformers. New approaches must fit in with what is understood to and acceptable by the people.
- (ii) The structure and functions of government. Governments are consistently changing their structure and functions in respect of land management which is an indication that they are aware of the need to develop more effective management processes.
- (iii) Procedures for land transfer and permission to develop land. Those need to be looked at, for in many cases, they are still based on outdated colonial models. It is necessary, however, to be aware that vested interests may wish to preserve the old procedures.
- (iv) The role of the private sector is underplayed in too many countries. Reform and good ideas for making land management more effective is not a monopoly of the public sector and there are many roles which the private sector can and should be given an opportunity to perform.
- (v) The overall role of the law. Law can provide certainty and can also provide protection to the urban poor. Law should not be neglected in any reform of urban land management.

There are two levels of principles which need to be observed in any reform of land management law. They are first and second order principles. First order principles are as follows: (i) Muddling through. This is how bureaucracies operate in practice; they react to events and bring about reform little by little so ensuring that no one feels threatened by it; (ii) Incremental change. This is a step beyond muddling through. It involves planned change but done via a series of small scale steps. It ensures that resources are not wasted in grandiose schemes of reform yet an overall plan is adhered to. (iii) Fundamental reform. This consists of a planned programme of reform which attempts to cover all areas of land management at the same time. There are examples of this approach in Japan, Taiwan, Kenya. It requires a committed and strong government willing to take on vested interests.

In practice, most governments opt for combination of (i) and (ii).

Second order principles are as follows: Land management reform must be: (i) Equitable. The system should aim to contribute to righting the present imbalance towards the well-off in most urban development processes. (ii) Flexible. The system must be such that it can accommodate change and growth, the twin characteristics of most urban development processes. (iii) Environmentally conscious. Land management law must be geared to ensuring the sustainable development of a city's land resources. (iv) Participative and easily manageable. People must be involved in the management of their own land resources and the administrative system must be easy to understand and use. (v) Simple. This follows from (iv) above. Keep procedures to a minimum and the forms needed short and written in language the people can follow. (vi) Efficient. This refers to value for money: keep the costs of the system down, make sure the

most cost-effective way of achieving ends is adopted; be eclectic in borrowing from other systems. (vii) Administratively fair. This an important procedural value: ensure any hearings are conducted fairly; pay compensation promptly; provide a system for investigation and redress of grievances.

Two important areas for action are:

(i) Land-use and building costs must be reduced. Regulations must be devised which are meaningful, applicable to all, affordable to the majority of the urban population and easy to comply with.

(ii) The land tenure, tilting and access system must be adapted so as to ensure that the majority of the population in a city can get access to land use since that will facilitate their becoming full citizens and encourage the development of an urban civil society.

H.1. PRESENTATION OUTLINE: LAND MANAGEMENT LAW

Presented by:
Mr. P. McAuslan
Professor of Law
University College, London

H.1.1 Introduction

H.1.2 Rationale

H.1.3 Key Issues

- (a) Attitudes Regarding Land
- (b) Structure, Function and Roles of Government
- (c) Procedures for Land Transfer, Permission for Land Development and Land acquisition
- (d) Role of Private Sector
- (e) Overall Role of Law

H.1.4 Principles for Tackling the Issues

- (a) First Order Principles
 - (i) Muddling Through
 - (ii) Incremental Change
 - (iii) Fundamental Reform
- (b) Second Order Principles
 - (i) Equitable
 - (ii) Flexible
 - (iii) Environmentally Conscious
 - (iv) Participate and Easily Manageable
 - (v) Simplicity
 - (vi) Efficient
 - (vii) Administrative Fairness

H.1.5 Mechanics

- (a) Survey
- (b) Analysis
- (c) Plan
- (d) Implementation
- (e) Feedback

H.1.6 Actions

H.1.7 Conclusion

H.2. EXERCISE: LAND MANAGEMENT LAW

Please find herewith two terms of reference for consultants who are asked to draft legislation on land planning.

According to the working group to which you belong, please take a copy of both terms of reference and

- (a) consider the relevance of the different provisions in terms of reference in order to draft legislation on land planning;
- (b) respond in a draft form to the elements of the provisions

H.2.1. DRAFT PROTOTYPE BILL FOR PHYSICAL PLANNING, BUILDING CONTROL AND ENVIRONMENTAL PROTECTION

CAR/89/006

TERMS OF REFERENCE

Post Code : CAR-600-9-006

Post Title : Legislation Consultant

Duration : One Month

Date Required : As soon as possible

Duty Station : At work base of the Consultant

Duties : In collaboration with the Chief Technical Adviser, the consultant will:

- 1) Review existing legislation in the Caribbean pertaining to physical planning and building control, including draft legislation prepared by UNCHS for Trinidad and Tobago, British Virgin Islands and Turks and Caicos Islands.
- (2) Review draft legislation pertaining to coastal area protection in the BVI prepared by OECS/NRMU - OAS.
- (3) Particularly consider provisions for enhancing planning legislation given the peculiarities of island States; the means whereby building control measures in the OECS could be strengthened through harmonized building codes and development procedures, as well as special consideration for coastal zone conservation measures.
- (4) Prepare a draft Bill in accordance with the above.

Language : English

Qualifications : The consultant must have professional qualifications in law and extensive experience in the Commonwealth Caribbean.

H.2.2. TERMS OF REFERENCE

BACKGROUND INFORMATION

The United Nations Development Programme and the United Nations Centre for Human Settlements, in co-operation with the Organization of Eastern Caribbean States (OECS), have been assisting the OECS countries with the formulation of Building Codes, Building Guidelines and Procedures for Processing Development Applications. In addition, assistance is being provided to a number of country-specific land-use planning activities. It has been noted that much of the legislation pertaining to planning and development control is dated. Furthermore, as island States with limited natural resource capacity, conservation of the environment has emerged as a critical issue in spatial planning and development.

Consideration is being given to strengthening the capacity of the agencies charged with the responsibilities for planning and environmental protection. A significant constraint is the hitherto disjointed approach to issues dealing with the terrestrial environment. Therefore, while it is recognized that coastal and other sensitive areas may require consideration, it is believed that such requirements could be addressed under harmonized legislation, notwithstanding the possible need for additional special regulations.

The draft Bill will serve as a basis for further consultations with the OECS Secretariat and the respective governments.

SPECIAL INSTRUCTIONS

The consultant will provide the Executing Agency with the original and three copies of the Bill.

No travel is envisaged at this stage. The consultant may obtain the relevant existing legislation for review from the UNCHS Chief Technical Adviser at the UNDP office in Barbados. All materials collected or provided in connection with this consultancy is to be treated as confidential and must be turned over to the executing agency on completion of the assignment.

Post Title : Planning Legislation Specialist
Duration : Total three (3) months, split mission

Duties : In consultation with senior counterparts of the Division and other senior officials of the Government, mainly in the Ministry of Finance and Planning, the Ministry of Legal Affairs, and other departments directly concerned, the consultant's duties will cover, but will not be limited to, the following:

1. Review the operation of the planning and associated legislation through a reading of relevant documents, interviews with relevant officials and other persons and visits to local authorities and regional offices of the Town and Country Planning Division;
2. Write a draft report on the findings of the review;
3. Discuss the report with relevant officials;

4. Draft revised legislation on the basis of the report and the discussions held on this report. Prepare a commentary and explanation of the draft legislation;
5. Discuss this draft legislation with relevant officials and amend the draft in the light of the discussions;
6. Draft regulations and forms to accompany the legislation, as required;
7. On the acceptance of the draft legislation by the Government, the Planning legislation specialist will:
 - a) Write a manual explaining the law in clear everyday terms for the use of officials in the Town and Country Planning Division and for developers and their advisers;
 - b) Write a legal handbook on the legislation for the use of lawyers involved in the administration and interpretation of the legislation.
8. Undertake any other work in connection with the consultancy as may be agreed between the Government, UNCHS, UNDP and the Specialist;
9. At the end of each field mission, write a short Memorandum to be left with the government before leaving the country, with copy to UNDP (Port of Spain) and UNCHS (Nairobi); and
10. Prepare a final report consisting of a summary of findings and recommendations related to points 1 to 8.

H.3. BIBLIOGRAPHY OF SELECTED TRAINING MATERIAL: LEGISLATION ON LAND MANAGEMENT

- H.3.1. McAuslan, P., "Institutional and Legal Arrangements for the improved administration of land development", Regional development dialogue, vol. 13, 1993, pp. 14-32.
- H.3.2. McAuslan, P., "The role of law in urban planning", in DEVAS, N., and RAKODI, C. (ed) Managing fast growing cities. New approaches to urban planning and management in developing world, pp.242-264.
- H.3.3. UNCHS (Habitat), Town and country planning act for Trinidad and Tobago. Case study, Nairobi, May 1989.
- H.3.4. UNCHS (Habitat), "Institutional and legal options for administration of land development", background paper, Nairobi, January 1991.
- H.3.5. Commission on Human Rights, Sub-commission on prevention of discrimination and protection of minorities, "The realization of economic, social and cultural rights". The right to Adequate housing, working paper submitted by Mr. Rajindar Sachar, expert appointed pursuant to resolution 1991/26 of the sub-commission, doc. E/CN.4/sub.2/1992/15, 12 June 1992.
- H.3.6. LECKIE, S., "From housing needs to housing rights:n analysis of the right to adequate housing under international human rights law", International institute for environment and development, human settlements programme, undated.
- H.3.7. McAUSLAN, P., "The Lesotho Highlands water project and Environmental law: A case study in the light of "Our Common Future "undated".
- H.3.8. LHDA Consultative working group on land acquisition and compensation policy (Final Draft), 16 April 1988.

**I.1. PRESENTATION OUTLINE:
LEGAL ASPECTS OF SOLID WASTE MANAGEMENT**

Presented by:
Mr. P. McAuslan
Professor of Law
University College, London

I.1.1. The Institutional Structure

Central and Local and their Functions

I.1.2. Privatization and its Regulation

I.1.3. The Classification of Waste

- a) Residential/Domestic
- b) Trade/Commercial
- c) Industrial including construction
- d) Medical
- e) Hazardous

I.1.4. Collection and Transportation

I.1.5. Disposal, including Disposal Sites

I.1.6. Civil Liability

I.1.7. Relationship of National to International Law

I.3. BIBLIOGRAPHY OF SELECTED TRAINING MATERIAL: LEGISLATION ON WASTE MANAGEMENT

- I.3.1. MODEL LAW: Report of the meeting of experts on model national legislation on the management of hazardous wastes in accordance with the Basel Convention on the control of transboundary movements of hazardous wastes and their disposal. (UNEP/CHW.1/10).
- H.3.2. Cote d'Ivoire: Law of 5 July 1988 on the protection of public health and the environment against the effects of toxic industrial wastes and harmful substances (excerpt)
- I.3.3. Philippines: The toxic substances and hazardous and nuclear wastes control Act of 1990. (excerpt)
- I.3.4. Paraguay: Law No. 42/90 of 18 September 1990 prohibiting the importation, dumping and use of products classified as hazardous industrial wastes or as toxic wastes and establishing the corresponding penalties for non compliance. (excerpt)
- I.3.5. UNEP, "Proposal for a basic law on environmental protection and the promotion of sustainable development", Document series on environmental law n^o1, 1993.

HAZARDOUS WASTE MANAGEMENT AND PROBLEMS IN CHINA

National Environmental Protection Agency
Beijing, China

1. Background and present situation of hazardous waste in China. China is a very large country with a population of 1.16 billion in 1990. It contains 28 provinces and 3 cities under the jurisdiction of central government. China's industry has grown very rapidly in recent years. The gross output value of industry in 1990 reached 2392.4 billion yuan RMB. Among them, state-owned industrial enterprises were 54.6%. Urban collective owned units were 25.6%, individual-run industrial enterprises were 5.4% and the other economic types were 4.4%. The average growth rate of gross national product were 9% per year during 1980-1990. The total output of coal in 1990 was 1080 million tons, crude oil was 138.31 million tons, steel was 66.35 million tons, cement was 209.71 million tons and electricity was 618 billion KW/H.

With the development of our national economy, the quantity of solid waste including industry waste and hazardous waste is large. According to the statistics in 1992, the total amount of solid waste reached 620 million tons, 30-40 million tons of which was hazardous waste, accounting for 5-7% of the total quantity. Among them, metallurgical waste accounted about 14 million tons, chemical waste 11 million tons, waste paint and coating 70 thousand tons, waste oil 240 thousand tons, waste solvent 390 thousand tons and waste primary and pregnant liquor 291 thousand tons. The municipal wastes produced each year are 80 million tons. The rate of comprehensive utilization of solid waste at present is about 41% and the rate of disposal is still quite low, most of which are simply piled up or directly discharged. The accumulated quantity of solid waste has reached 6 billion tons. The environmental sound disposal of municipal waste is only 8%. About 2/3 of cities in the whole country are surrounded by municipal waste. It pollutes surface water and ground water seriously and the urban environment has been affected by solid waste pollution. All these have hindered the development of urban construction.

2. Control of hazardous waste. Although the management of hazardous waste is just beginning in our country, our government has paid more attention to the environment management of hazardous waste, and made some progress in the past years. In order to control the pollution, the National Environmental Protection Agency of China has established the solid waste management division to manage the hazardous waste. In order to control the relative priority of hazardous waste, NEPA and the Ministry of Chemistry unitedly issued "Rules on the prevention and control of environmental pollution in the production and construction of Chromium compounds;" the NEPA and The Ministry of Energy unitedly published the "Rules on the prevention of environmental pollution by power devices containing polychlorinated biphenyls and their relevant wastes;" The NEPA issued "The management regulations on the prevention and control of environmental pollution by tailing."

"The law of prevention and control of pollution for solid waste" has been drawn up and will be issued in the near future. This law includes the management of industry waste, hazardous waste and municipal waste. Since the hazardous waste management is relatively important, a more detailed regulation, "The management regulation of hazardous waste" has been formulated. In this regulation, the following principles of hazardous waste management are explicitly reflected: the principle of waste minimization; the comprehensive utilization principle; the precautionary principle, the integrated pollution control principle; the principle of polluter payments, environmental sound disposal principle; and least transboundary movement principle. Several systems are also included in this regulation: Report and registration system; waste exchange system; permission system; and manifest tracking system. Since the hazardous waste transboundary movement has become one of the global environment problems, we are drawing up "Regulation on Strict Control Transboundary Movement of Hazardous Waste." According to the Basel convention and the Chinese condition, those wastes which can be used as raw material,

energy resources or direct reuse, should be permitted for import by NEPA. Other wastes are prohibited to enter China to be disposed. We also strictly control hazardous wastes to be exported. "Standards for pollution control of solid waste for non-ferrous metal industry", "Standards for pollution control of waste containing polychlorinated biphenyls", "Standards for pollution control of power station fly ash for agricultural use", "Standards for controlling radioactive substances in industrial solid waste use for construction materials" and "Standards for pollution control of cyanide solid waste" has been issued. The other standards, such as municipal and hazardous waste landfill and pollution control of heavy metal are being formulated.

Hazardous waste survey and waste exchange system has been performed as the trial in the 17 cities since 1992, in order to have a good grasp of hazardous waste generation, storage, utilization, treatment and disposal, and it can be served as basic resources of making strategy, reduce waste production plan and control pollution. This hazardous waste survey can be finished early next year. It will be widely spread all over the country next year after the experience is obtained.

Manifest tracking and permission system is being considered by NEPA.

3. Technology used for hazardous waste control are focussed on following items:

A) Turn the end-pipe treatment to the whole process management. That is to adopt the cleaner production technology to reduce the waste quantities. In the World Bank technical assistant project of cleaner production technology, there are three items related to hazardous waste: (a) cleaner production technology for new process of non-calcium roasting chromite; (b) arsenic recovery by roasting and dust collecting in two stages; and (c) technology on acid water neutralization from steel slag.

B) Strengthen the comprehensive utilization of hazardous waste. Promote waste centralized utilization and waste exchange. We have several demonstration projects for centralized utilization of hazardous waste in Shanghai, Shenyang and Shenzhen city. To centralized reuse the waste oil, waste solvent, acidic solution and basic solution, waste electroplating solution chromium residue, mercury compounds and so on. Several waste exchange centers have also been setup to offer the waste information.

C) Carrying out concentrating disposal of hazardous waste and establishing regional centre for hazardous waste disposal. For some kind of hazardous waste that have small quantity should be concentratively treated and disposed for the large enterprises, they should set up their own treatment and disposal facilities to treat and dispose their own hazardous waste produced. For the small and medium enterprise, the centralized disposal facilities should be established. So far, there is no central treatment and disposal facility in big cities in our country. Now three hazardous waste landfill are being considered or designed. One is in the shenyang city which will use the World Bank's loan. The second one is in Wuxi city which will be supported by central government. The last one is in Shenzhen city which will be constructed by local government. The PCB incinerator and chromium residue treatment facility is also listed in the Eighth Five year plan of science and technology research projects.

4. Special problems. The special hazardous waste problems needed to be solved in our country are as follows:

The first problem is the institutional problem, that is the lack of laws and the standards. The factories discharges their hazardous waste without any non-harmful treatment because of the lack of laws and standards. Now we are formulating the law of prevention

and control of pollution for solid waste and the management regulation of hazardous waste. Several pollution control standards are being formulated.

The second problem is the enforcement of the laws. Although we have issued several regulations, the factories do not know these regulations or do not obey these regulations. This year, NEPA has organized several investigation teams to inspect the enforcement of the laws.

The third problem is the lack of disposal facilities. There are no central disposal facilities in big cities. Only a small part of the hazardous waste has been reused or recovered. Now we have considered to set up several hazardous waste landfills and some incinerators.

The fourth problem is the lack of funding. To build the incinerator, or landfill need a great amount of investment. The local governments have no such financial support to establish the disposal facilities. We will contact the World Bank and other international organizations to promote the establishment of disposal facilities for financial support.

5. Special issues

A) Relative priority of hazardous waste control

The relative priority of hazardous waste control are as follows:

The first priority is to formulating the laws and regulations and policies, such as the regulation of hazardous waste and related regulation of pollutants which may seriously damage the environment. The lack of laws is the common situation in the developing countries. The factories discharge their hazardous waste without any treatment causing serious environmental problems. So the formulation of the laws is very important to the developing country.

The second important issue is to establish management system, such as report and registration system, waste exchange system, manifest tracking system and permission system. For the hazardous waste management, it should be managed from generation, collection, storage, utilization, treatment to disposal.

The third issue is the enforcement. It is very important and difficult to carry out.

B) Regarding the laws, regulations, enforcement adequate to deal with hazardous waste control, it is very important to formulate the laws. But in the developing country, the enforcement is based on the public awareness of the environment and the economic strength. Because the public awareness is relatively low and economic is weak, so the enforcement is relatively difficult in the developing country.

C) The most significant technologies needed for hazardous waste control in the developing country are the waste minimization technology, utilization technology and disposal technology, such as incinerator and landfill. The relative emphasis should be placed on treatment and disposal technology.

D) The industrialized countries provide assistance to developing countries in the both technology and financial support. To support the demonstration projects and hold the training course and so on.

E) The transboundary movement of hazardous waste is a significant problem. The "Basel Convention on the control of transboundary movement of hazardous waste and their disposal," which passed in March 1989, is the first international treaty whose purpose is to control and manage hazardous wastes." The Convention has great actual and historic significance for environmental protection and hazardous waste disposal. China is member of the Basel Convention. The National Environmental Protection Agency is the competent authority and focal point for carrying out the country's obligations under the Convention. NEPA and General Administration of Customs have issued a circular on the strict control of transboundary movement of hazardous waste. In this document, dumping, incineration and landfill of the hazardous waste into the Chinese territories are prohibited. Special uses of waste as raw materials, energy sources or recovered materials must be examined and approved by the appropriate environmental protection departments. Since 1991, NEPA has received more than 20 applications for importing some kinds of hazardous waste to China, such as waste oil, waste solvent, plastic waste and waste battery. According to our regulation, all these applications are not be approved. Recently, we also find the illegal transboundary movement of hazardous waste to our country. So the Basel Convention is very important to protect our environment.

**J.1. PRESENTATION OUTLINE:
LEGAL AND INSTITUTIONAL ASPECTS OF
ENVIRONMENTAL IMPACT ASSESSMENT (EIA)**

Presented by:
Mr. L. Kurukulasuriya
Chief, Education, Training
& Information Unit
Environmental Law and Institutions
Programme Activity Center, UNEP

J.1.1 Introduction

- (a) Role of law in promoting environmental management for sustainable development
 - paradigm shift in environmental management implications for law and institutions
 - prevention of pollution
 - management of natural resources for further exploitation
 - sustainable development
 - equity and global partnership
- (b) *Historical evolution of legal regulations of environmental management.*
 - Scope of environmental law
 - Types of legislation affecting environmental management for sustainable development
 - Evolution of legal regulation
 - use-oriented legislation
 - resource-oriented legislation
 - system - oriented legislation
- (c) Current status of legal regulations of environmental management

J.1.2. Principles of E.I.A.

- (a) Nature and scope of EIA as an instrument for promoting environmental protection; implications for achieving sustainable development
- (b) International legal instruments
 - Binding laws and "soft" law
 - Legal principles for environmental protection and sustainable development (expert group on environmental law of WCED)

- UNEP's goals and principles of EIA (adopted at 14th session of UNEP Governing Council
- see Annex
- Principles of EIA in a transboundary context
- UN/ECE Convention on EIA in transboundary context (Espoo Convention)
- Other legal instruments
- (c) EIA regulation at regional and inter-governmental levels
 - EEC-Directive No. 85/337/EEC of 27.6.1985
 - OECD - recommendation of the council on environmental assessment of development assistance projects and programmes to member governments of 20.1.1985

J.1.3. National legislative and institutional for EIA

- (a) Scope of legal regulation
- (b) Elements of national legal and institutional framework
 - Requirement of EIA with respect to activities likely to have a significant impact on natural resources and the environment - stage at which EIA is required
 - Criteria and procedures for determining which activities require EIA - mechanisms of lists covering project, areas and resources; preliminary assessment, etc.
 - Institutional arrangements - the authority empowered to required EIA to administer the process
 - Communication procedures and time table
 - Format and requirement of EIA report - responsibility for preparation report having regard to requirement of objectively and transparency
 - Consideration of alternatives and mitigating factors
 - Review of EIA - scientific and technical review - institutional arrangements
 - Public participation - rights of the public; procedural matters
 - Decision-making process
 - Appeals from decisions of authorized bodies — administrative, quasi-judicial and judicial
 - Transboundary impacts — requirements of notification, consultations and accommodation
 - Monitoring and assessment
- (c) Examination of relevant legislation of several developed and developing countries.

J.1.4. Obstacles to effective implementation of environmental legislation

- Nature of environmental legislation
- Institutional arrangements and process
- Institutional arrangements and process
- Socio-economic and country-specific context of legislation

J.2. LEGAL AND INSTITUTIONAL ASPECTS OF ENVIRONMENTAL IMPACT ASSESSMENT

Lal Kurukulasuriya

Chief

Environmental Law Education, Training and Information

Environmental Law and Institutions

Programme Activity Centre

The level and pace of socio-economic advancement in developing countries has important implications for the efficacy with which legislature and institutional regimes are developed and applied for the promotion of environmental management. In the first instance, the imperatives of rapid social and economic development could influence the political will to initiate, implement and enforce appropriate environmental policies and laws. Secondly, these development imperatives often circumscribe the limits of resources available for environmental protection. Thirdly, implementing agencies often operate under very severe resource constraints and fourthly, the relatively low level of public awareness, particularly environmental awareness does little to trigger a sense of urgency and resolve for political and legislative action for environmental management for sustainable development. In the absence of familiarity with environmental legislation and the environmental impacts of human activities there is likely to be no spontaneous observance of normative demands nor efforts at environmental protection and enhancement. In the last instance, the desire to satisfy basic social needs could very well override even basic environmental considerations.

It might also be remembered that environmental management in many countries, especially the developing countries, is achieved not only through environmental legislation, i.e. laws, regulations and rules which are enforceable in a court of law, but also through administrative provisions such as administrative orders, technical standards etc. which are applied through various administrative mechanisms. This is especially true in relation to the implementation of international environmental conventions. Often, many years pass before provisions are established in laws for the implementation and application of the provisions of international agreements. It is equally true in the implementation, especially at its early stages, of environmental policy, such as the requirement of environmental impact assessment in respect of development projects and the procedures to be followed in respect of such assessments. From this perspective, environmental legislation is one of the chief tools for **formulation** of environmental policy while also being one of the major instruments for **implementing** it.

The requirement of a State to conduct Environmental Impact Assessments in respect of activities that are likely to significantly affect the environment has been reflected in Principle 17 of the Rio Declaration on Environment and Development, Article 5 of the Legal Principles for Environmental Protection and Sustainable Development, adopted by the Experts Group on Environmental Law of The World Commission on Environment and Development and in the 1987 Goals and Principles of Environmental Impact Assessment developed under the auspices of UNEP by the Working Group of Experts on Environmental Law and which were adopted by the UNEP Governing Council at its 14th session, and commended to States to be considered for use as a basis for preparing appropriate national measures including legislation. Such a requirement in the context of transboundary impacts has also been incorporated in several regional agreements, e.g. UN/ECE Convention on Environmental Impact Assessment in a Transboundary Context (1991) and several Regional Agreements concluded under UNEP's Regional Seas Programme and resolutions of inter-governmental bodies, e.g. 1984 ECA Council Resolution on Environment and Development in Africa, 1984 EEC Council Directive on Assessment of the Effects of Major Public and Private Projects on the Environment.

The issue to be addressed here is how environmental damage can be avoided or reduced so as to ensure that development initiatives and their benefits are sustainable. The objective of environmental management should be to achieve the greatest benefit presently possible from the use of natural resources without reducing their potential to meet future needs and the carrying capacity of the environment. Taking environmental consideration into account in development planning does not imply that the pace of socio-economic progress will be slowed down, and taking environmental considerations into account in the various phases of the project cycle must not be seen as placing undue constraints on a country's development options. If a project is to be suspended on environmental grounds, alternative options that are environmentally sound must be provided to meet the country's development needs. Moreover, implications of environmental impacts assessed from the global standpoint cannot be insensitively translated into specific action in the developing countries in the absence of concrete alternatives that would enable the poor countries to relate the short-term well-being of their populations to their long-term well-being and to that of the world.

For most projects, particularly those involving large public investment in areas such as infrastructure, an environmental impact assessment (EIA) should be carried out and linked to the cost-benefit analysis. The objective of the EIA is to ensure that environmental aspects are addressed and potential problems are foreseen at the appropriate stage of project design. EIA should be envisaged as an integral part of the planning process and initiated at the project level from the start.

Various guides on EIA are available. The main steps are as follows:

- * Preliminary activities include the selection of a coordinator for the EIA and the collection of background information. This should be undertaken as soon as project has been identified.
- * Impact identification involves a broad analysis of the impacts of project activities with a view to identifying those which are worthy of a detailed study.
- * Baseline study entails the collection of detailed information and data on the condition of the project area prior to the project's implementation.
- * Impact evaluation should be done whenever possible in quantitative terms and should include the working-out of potential mitigation measures. Impact evaluation cannot proceed until project alternatives have been defined, but it should be completed early enough to permit decisions to be made in a timely fashion.
- * Assessment involves combining environmental losses and gains with economic costs and benefits to produce a complete account to each project alternative. Cost-benefit analysis should include environmental impact where these can be evaluated in monetary terms (see Economic Analysis section).
- * Documentation is prepared to describe the work done in the EIA. A working document is prepared to provide clearly stated and argued recommendations for immediate action. The working document should contain a list of project alternatives with comments on the environmental and economic impacts of each.
- * Decision-making begins when the working document reaches the decision maker, who will either accept one of the project alternatives, request further study or reject the proposed action altogether.

- * Post audits are made to determine how close to reality the EIA predictions were.

National Legislative and Institutional regimes for Environmental Impact Assessment

What then are the main elements of an adequate national legislative and institutional regime to give effect to and implement the above mentioned principles of environmental impact assessment? Though a universally applicable model of legislation for environmental impact assessment may not be feasible, it is possible to identify certain crucial elements of the EIA process that may be regulated through legislative means. In this connection, it might also be borne in mind that "laws" in the sense of statutes enacted by the legislature represent only one type of law making and could yield an incomplete picture of the regulatory regime, which may also include, administrative directives, judicial decisions, customs, etc.

Having regard to the principles of Environmental Impact Assessment discussed and State practice in the legislative and institutional field, it would appear that the following constitute the principal elements of a national regulatory regime for EIA:

- 1) Requirement of EIA in respect of activities likely to have a significant impact on natural resources and the environment i.e. stage at which EIA is required.
- 2) Criteria and procedures for determining which activities require EIA, e.g. lists of relevant projects, areas and resources; requirement of a preliminary assessment etc.
- 3) Institutional arrangements - - the establishment and empowerment of a designated authority to require EIAs and administer the process.
- 4) Communication procedures and time tables.
- 5) Format and requirements of EIA report - responsibility for preparing report having regard to requirements of objectivity and transparency.
- 6) Review of EIA - scientific and technical review - institutional arrangements.
- 7) Public participation - rights of the public; procedural matters.
- 8) Decision making process.
- 9) Appeals from decisions of authorized bodies - administrative, quasi-judicial and judicial.
- 10) Transboundary impacts - requirements of notification, consultations and accommodation.
- 11) Continuing monitoring.

The legislation governing E.I.A. should indicate as clearly as possible which projects are subject to EIA procedure and which are not, so as to avoid bureaucratic constraints on minor activities. If it is felt that the requirements for E.I.A. would change with time, it may be appropriate to make only a general statement in the body of the legislation and keep the specifics for supplementary guidelines or regulations. Rules governing an E.I.A. should always be documented.

On the contents of E.I.A., the law may provide for submission of a written document to a designated agency or decision-making body describing the environmental impact of a proposed project and/or alternatives and mitigating measures (and their assessments). At a minimum, the document should contain:

- i) A description of the proposed activity;
- ii) A description of the potentially affected environment, including specific information necessary for identifying and assessing the environmental effects of the proposed activity;
- iii) A description of practical alternatives as appropriate;
- iv) An assessment of the likely or potential environmental impacts of the proposed activity and alternatives, including the direct, indirect, cumulative, short-term and long-term effects;
- v) An identification and description of measures available to mitigate adverse environmental impacts of the proposed activity and alternatives, and an assessment of those measures;
- vi) An indication of gaps in knowledge and uncertainties which may be encountered in compiling the required information;
- vii) An indication of whether the environment of any other State or areas beyond national jurisdiction are likely to be affected by the proposed activity, and possible alternatives; and
- viii) A brief non-technical summary of the information provided under the above headings.

The E.I.A. legislation or provision should establish effective review and dispute settlement procedures to avoid unnecessary delays in decision-making. Technical review may be undertaken by an independent agency of environmental experts on the proposed project or in exceptional circumstances the decision maker. There is need for a tribunal or arbitrator for dispute settlement, since the ordinary courts may be too busy to act on E.I.A. cases promptly because of the workload they have. An independent arbitrator or a special body could be provided for to hear objections and make decisions with reasonable dispatch. Such an arrangement will ensure that E.I.A. continues to be a tool to aid development rather than being an impediment to it.

J.3. BIBLIOGRAPHY OF SELECTED TRAINING MATERIAL: ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

J.3.1. LEGISLATION ON EIA

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ASIA

Malaysia : See A.3: Environmental Quality Act, 1974, section 34a. Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order, 1987

EUROPE

European Community : Council Directive of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment (85/337/EEC)

NORTH AMERICA

Canada : Canada environmental assessment act (1192)

J.3.2. LEGAL AND INSTITUTIONAL ASPECTS OF EIA

International Documents

1. UNEP, "Environmental Impact Assessment," environmental law guidelines and principles No. 9, Nairobi 1987.
2. Convention on Environmental Impact Assessment in a transboundary context. Espoo 25 February 1991.
3. Council directive of 27 June 1995 on the assessment of the effects of certain public and private projects on the environment doc. 85/337/EEC.

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1. An act establish a federal environmental assessment process, Bill C-13 assented to 23 June 1992.
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3. Environmental Protection (General provision) Act of Netherlands, March 1989.
4. Environmental impact assessment decree No. 86, Nigeria 1992.

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UNEP'S APPROACH FOR CAPACITY BUILDING FOR SUSTAINABLE DEVELOPMENT

Presented by:
Mr. A. Abaza

1. Principles

- a) The transition to sustainable development at all levels (national, regional and global) is a direct function of a multitude of issues including fair international relations, *inter alia*, in trade, aid policies, in addressing the problem of the Third World debt, flow of financial resources and transfer of sound technology to the developing countries and economies in transition.
- b) Environment is an integral and vital part of the sustainable development decision-making process, and a component which has been more often neglected and to some extent least understood. It is a new and a rapidly developing concept.
- c) Environmental management and decision-making are comprised of several sustainable development elements, no one of which is sufficient within itself. Thus a successful national plan for sustainable development, depends upon linking and incorporating a number of key components.
- d) A strong commitment from the recipient government to give high priority to NPSD is a necessary prerequisite. That commitment must be supported by a consistent, long-term and systematic capacity-building programme drawing, in the first instance, on indigenous expertise, capacities.
- e) The coordination of aid and development assistance is the primary role of recipient governments.
- f) Each country has its conditions (different state of development and economic growth, natural resources endowment, development potentials, and social structure and background) that no single programme definition could provide the answer or solution to place economies onto a sustained path of development.
- g) A fully integrated and well-documented capacity-building approach for sustainable development should draw the existing host country capabilities to the maximum extent possible.

II. Methods

Particular methods which comprise of processes, institutions, approaches and methodologies.

- a) An organizational approach for a broad programme to provide the needed environmental capacity-building, through national plans for sustainable development.
- b) Identification of the basic elements countries require to carry out environmental management and to make a strong environmental input to the national decision-making process. As the elements are part of a system and are inter-connected, unless the basic elements of environmental management and decision-making are in place, it is most unlikely that developing one or two isolated capacity elements would provide a viable system. Thus, success in capacity-building strongly depends upon providing to a government, at least the critical elements of the management system.

- c) A collaborative coherent programme approach with other international organizations, research and development assistance institutions each contributing in their area of expertise.

III. Objectives

An improved and broadened approach to assisting developing countries and countries in transition to market economies in strengthening their capacity for an integrated approach to sustainable development decision-making and management.

IV. Activities in relation to National plans for sustainable development.

UNEP's activities are based on a holistic approach and focussed on the importance of interconnections and inter-dependencies between and among the various elements of environmental management. These consist of a package of components which include, institution-building, environmental information, monitoring and assessment, environmental policy development, environmental law and regulations, the economic tools for environmental management and environmental education and training. The basic elements can be summarized as follows:

a) Commitment and Institutional Mechanisms

i) Government Commitment

The starting point for national plans for sustainable development, is a firm commitment on the part of a government to put a priority on and to invest the resources, energy and time needed to develop the necessary capacity. The obstacles to successful capacity-building are many and powerful. They include competing political and economic considerations, weak institutions, absence of data and knowledge, lack of human and financial resources, an uninformed population and more. So unless a government and the promoter(s) of capacity-building services are ready and determined to invest fully in the capacity-building effort for sustainable development, results are not likely to meet expectations of the plans.

ii) An Integrated National Environmental Policy

More than anything else, the transition to sustainable development depends upon a merger of environment and development in decision-making. An Integrated National Environmental Policy establishes the government's clear priority on the environmental components and relates them to development policy for sustainability. It should set out the government's goals and outline how it will translate those goals into specific actions within the framework of the country's development plan. It should outline the specific objectives, institutions, approaches, programmes, activities and resources that will be employed to carry out the policy.

iii) A National Environmental Mechanism

A major impediment to incorporating the environmental components into developmental planning in most developing countries or in countries in economic transition is the lack of adequate institutional infrastructure and mechanism. Some organizational mechanism must exist to ensure that the environmental priorities of national planning are observed and strived for. Clear statutory powers combined with the authority to carry out organizational programmes and activities in the environmental field are essential. Representative of the environmental institution must be able to participate in and make a significant contribution to governmental sustainable development policies and plans.

There is no one mechanism which could serve every situation. They must be tailored to the unique conditions and circumstances of each country. What is important is not the structure, but the ability and the process by which environmental considerations are brought into the decision-making and planning process.

b) Information and Assessment

Sustainable development cannot be achieved unless decision makers have sound scientific and economic data on the condition of the environment, the resource base and the economy and unless they have the ability to evaluate the data available. Hence monitoring and assessment capability is essential to achieving sustainable development. Governments must have the basis to identify the knowledge needed, to generate new knowledge, to gather and circulate specific data required and to disseminate knowledge to appropriate decision makers and the public in useful forms when needed. Environmental information is essential for national capacity-building. Increasingly, environmental indicators, international statistics and social and economic data are becoming important. Governments will have develop the capability to bring the large amounts of data to the decision-maker, scientists and the public.

c) Approaches, tools and methodologies

i) Environmental laws and regulations

These are essential tools for achieving sustainability. Unless the country's environmental and natural resource management efforts rests on a solid legal foundation, it is almost certain to fall short of achieving its objectives. Governments should ensure that comprehensive systems of environmental law cover, among other things, land use planning and development, sustainable use of natural resources, pollution prevention, efficient energy use, control of hazardous substances, waste disposal, protection of species and ecosystems, management of freshwater resources, environmental impact assessment, penalties for non-compliance, restoration of damaged ecosystem and strict liability in the event of accidents.

While laws and regulations are essential, it should be noted that increasingly the use of economic incentives and market-based instruments are being seen as an essential complement to the command-and-control approach to mobilize societies to protect and enhance the environment.

ii) Enforcement Capacity

Without enforcement capability, the laws and regulations are meaningless, and this is where so many developing country regulators often falter. Here the link between good monitoring (including equipment, testing facilities and trained personnel) and regulatory effectiveness if necessary.

iii) Sustainable Development Management Tools

A key challenge in promoting sustainable development is the integration of environmental considerations into development planning policies. It is apparent that decision makers need to realize the importance of applying economic analysis and instruments for sustainable management and development. The use of economic analysis and instruments for environmental management can contribute to the design and

implementation of sustainable environment management programmes at the national level, and enhance international cooperation to deal with global and regional environmental and development challenges. A few of the more essential tools include the following:

(a) Environmental Profiles/National State-of-the-Environment Reports

It is a vital starting point for identifying a country's environment considerations and a baseless report against which future changes in the environment can be judged. It is also an important vehicle for integrating environmental considerations into the sustainable development process.

(b) Environmental Guidelines and Procedures

These seek to draw upon experience to identify the opportunities and provide guidance to avoid pitfalls and contribute to the development of environmental management and sustainable development projects, programmes and policies. They identify remedial measures that should be incorporated in the conceptual and design stages of projects to prevent or reduce environmental damage caused by development activity. There are many valuable guidelines in use. The best approach is to identify those most practical and applicable to the needs of the government and which could be modified to suit the local conditions.

(c) Environmental Impact Assessment (EIA)

The role of EIA can be enhanced to be used as an effective tool for integrating environment and development in decision-making for sustainable development. It could be used in the development and formulation of sustainable projects, programmes and policies. EIA should aim at ensuring that potential problems of a project are foreseen and addressed at an early stage in the planning and design process and identifying problems, conflicts or natural resources constraints that could affect the viability of a project. The relationship between EIA and other appraisal methodologies such as cost-benefit analysis and risk assessment should also be identified.

(d) Other Economic Policy Instruments

These include fiscal and non-fiscal measures and instruments, and market-based incentives, natural resources accounting, internalization of environmental externalities, valuation of environmental goods and services and sustainable development indicators. Activities related to these areas are now directly being linked to UNEP's Programme in order to translate national capacity-building objectives into concrete development programmes and policy applications.

V. Popular participation and training

a) Sectoral Human Resource Development

A major effort should be placed on development national capabilities and expertise. This calls for coordination of the various human resource training opportunities available to ensure national requirements are met in the most cost-effective way.

b) Education and Training

Introduction of programmes supporting environmental education is a must as they are the key to sustainability. Ways must be developed to incorporate environmental themes into existing academic programmes and make environmental education a standard part of teacher's training. In this regard, governments should associate themselves with the International Environmental Education Programmes provided by the United Nations and other international organizations.

Well developed public information programmes are essential to public support of appropriate governmental sustainable development programmes. The goal should be to explain why a sustainable society is essential and to provide citizens with knowledge, skills, values and incentives to help them achieve and appreciate it.

(c) Public Involvement

It is more than ever essential for governments to find ways to enable the public to be full partners in decisions on policies, programmes and activities that affect their environment and resources. Community participation will ensure that decisions are sound and are supported by the public.

VI. Scientific Research and Studies

Sustainable development policies depend absolutely on sound scientific and technical knowledge and information. Studies and research are required to develop methodologies and tools for the implementation of sustainable development programmes. Areas for study and research include methodologies for the improvement of the analysis of sustainable development projects, application of economic analysis and tools for environmental management, and institutional arrangements and financial mechanisms required for the implementation of sustainable development programmes. Institutional capacities to enable developing countries undertake such studies and research including the identification of areas of research, financial and human resources required need to be identified.

VII. Financing Sustainable Development

The lack of adequate financial resources continues to be a major constraint for sustainable development in most developing countries. In this regard, the following need to be addressed: financial resources needed to introduce the necessary institutional changes required for sustainable development, financial resources needed to implement sustainable development programmes, sources of external financing, financial mechanisms which can be instituted by governments in developing countries and economies, to generate additional financial resources, allocation of investment resources of a national plan among regions and sectors to reflect sensitivity to environmental constraints and objectives.

All of the above measures cannot be addressed without touching on the debt problem of developing countries, the prevailing terms of international trade including pricing of agricultural products, subsidies to farmers and farm products, technology transfer, etc. Other equally important related issues are: aid policies and the conditionality of aid, and coordination of aid provided by donor agencies/countries to developing countries.

**K.1. PRESENTATION OUTLINE:
LEGAL AND INSTITUTIONAL ASPECTS OF STRATEGIES
FOR INTEGRATING ENVIRONMENT AND DEVELOPMENT PLANNING IN EIA**

1. Introduction
2. The Benefits of EIA
3. The EIA Process
4. EIA in Sustainable Development
5. Challenges
6. UNEP's EIA Programme
 - 6.1 General
 - 6.2 Objectives
 - 6.3 Strategy
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 - 6.4.1 Training and Education
 - 6.4.2 Workshops
 - 6.4.3 EIA Procedures
 - 6.4.4 Case Study Analysis, and Surveys
 - 6.4.5 Networking
 - 6.4.5 Database

K.2. LEGAL AND INSTITUTIONAL ASPECTS OF STRATEGIES FOR INTEGRATING ENVIRONMENT AND DEVELOPMENT PLANNING IN EIA

1. Introduction

Until the end of the 1960's, nature was treated as an infinite supply of physical resources to be used for human benefit, to be exploited as required. Projects were assessed purely in financial terms, without economic valuation of non-cash benefits and without environmental considerations.

During the 1970's, UNEP played a lead role in the creation of worldwide environmental awareness, leading to the development of different value systems. One outcome was that by 1980, development assistance institutions like the World Bank and other multilateral banks, had begun to tie the provision of development funding to assess the environmental impacts of proposed projects. Many lending institutions, as well as international environmental agencies such as UNEP, issued guidelines to assist in the carrying out of environmental assessments. The purpose of such guidelines is to ensure that proposed projects are designed and implemented in an environmentally sound manner. UNEP's own publications have included general guidelines, methodological overviews, emerging techniques, etc. UNEP has produced over 20 publications addressing EIA including: "The Economics of Survival: The Role of Cost-Benefit Analysis in Environmental Decision-Making," and "Analyzing the Options: Cost-Benefit Analysis in Different Economic Systems." In addition, the Paris Industry and Environment Office, the Regional Office for Asia and the Pacific, the International Register for Potentially Toxic Chemicals, and other UNEP offices have produced EIA guidelines.

In 1987, the Brundtland Commission, in a report entitled "Our Common Future," called for improved Environmental Impact Assessment procedures at all levels of government. Since then, there has been a rapid increase in the number of development agencies requiring EIA for its projects, an increase in the number of agencies establishing their own EIA guidelines, and a succession of stricter and more detailed EIA guidelines issued by major lending institutions.

Agenda 21 of UNCED further emphasized the need for an effective EIA process and for integrating environment and development. Moreover, it underlined the key role of UNEP in the further development and promotion of the widest possible use of environmental impact assessments, including activities carried out under the auspices of United Nations specialized agencies.

2. The Benefits of EIA

EIA is widely considered to be a valuable planning tool, but what are the benefits of undertaking an EIA? When carried out sufficiently early in the planning process, EIA has a number of benefits:

*** Benefits to the project**

The EIA, together with its mitigation plan, can prevent delays and avoid additional costs by unanticipated environmental problems during project implementation.

*** Benefits to the natural resource base**

The EIA helps to identify environmental issues that the project design should address and allows them to be dealt with in a cost-effective manner.

*** Benefits for inter-agency coordination and policy-making**

EIA provides a formal mechanism for inter-agency coordination in the field of development and environmental management.

*** Benefits for concerned groups**

EIA provides a means of examining issues and establishing communication between concerned groups potentially affected by a project or programme, and between the project proponents and the public at large.

*** Benefits for the long-term achievement of sustainable development**

In analyzing the interaction between the proposed project and its environment, and in improving the project design in terms of environmentally sound practices, EIA makes a major contribution to sustainable development at the macro level, particularly if applied to policies and programmes.

3. The EIA Process

Having established the usefulness of EIA, how is EIA actually carried out? EIA is usually executed by a team consisting of specialists qualified in disciplines such as biology, botany, limnology, economics, sociology, soils, meteorology, hydrology, etc. Though there has been a generation of a number of sets of EIA guidelines, the basic steps in the EIA process are common to virtually all of them. These steps are set out in the following diagram:



After project implementation, there may follow a review of the EIA, and an environmental monitoring and auditing programme which will provide further environmental checks and balances.

The essential components of these process steps are as follows:

Screening

This is the procedure for deciding on the level of EIA which is appropriate for the project concerned. A typical classification would be:

- (i) A project with diverse and significant effects requiring a full EIA.
- (ii) A project with very specific, defined effects requiring limited environmental analysis.
- (iii) A project which is unlikely to have significant environmental effects, not requiring EIA.
- (iv) An environmental project, in which environmental protection or enhancement is the major focus, therefore not warranting an EIA.

It should be noted that most financing institutions are presently "tightening up" their screening guidelines, i.e. the number of projects not requiring any type of EIA is diminishing.

Scoping

This is usually the major task in EIA. The aim of scoping is to ensure that the database addresses all the issues of interest, based on the anticipated impacts. The exercise sets the spatial and temporal bounds of the database. Considerable discussion with interested parties is usually required during Scoping.

Baseline Data Collection

The baseline is the record of what existed in the project area prior to the proposed development. It is a bench-mark against which project impacts can be measured. The exercise usually involves extensive field work, particularly in developing countries.

Impacts Prediction

At this stage, the EIA team predicts the likely impacts and estimates their nature and magnitude relative to the baseline data. This may be done in a variety of ways, but it is essential that the result reflects the secondary inter-sectoral linkages as well as the direct impacts of the project on the biophysical environment.

Mitigation Plan

Once the potential impacts have been identified, it is important to determine what, if anything, can be done to eliminate, modify or compensate for adverse impacts. These mitigating measures may include, for example, changes in design, in management practices or compensation programmes.

The level of detail required in the EIA process depends on the seriousness and nature of the likely impacts, which are considered firstly at the Screening stage, then again at the Scoping stage. It also depends on the stage in the planning cycle at which the EIA is being conducted. For example, an EIA designed to examine a number of project options from which the undesirable ones are to be eliminated will usually be at "reconnaissance" or "pre-feasibility" level, whereas a full EIA on a large project which has already reached the preliminary or final design stage will incorporate much more detail. The identification of the scope of the EIA and the level of detail required is normally set out in the EIA guidelines to be adopted or in the Terms of Reference for a particular EIA.

4. EIA in Sustainable Development

As we have seen, the main objective of EIA is to take into account environmental and natural resources considerations in project planning. However, although EIA is a necessary tool for sustainable development, as it stands it is not a sufficient one. It has to be supplemented by other tools. An important task for the future is to help develop and promote EIA models and other planning instruments based upon the expertise and development goals of developing countries. There are a number of areas where EIA is able to contribute to sustainable development:

Sectoral Integration

In order to achieve sustainability, environmental and socio-economic integration has to be achieved. As EIA is one of the few policy tools capable of integrating socioeconomic and biophysical considerations, it is already making a major contribution to the quest for sustainable development, although it still has a long way to go.

Sustainability Indicators

The achievement of sustainability requires indices and indicators which can be measured. Given the processes involved in EIA which seek to measure environmental impacts, EIA should in time be able to identify appropriate sustainability indicators such as maximum sustainable yields, local assimilative capacities, etc.

Quantification of Sustainability

When combined with natural resource valuation and cost-benefit analysis, EIA can provide a method of evaluating the overall net benefit of a project, an important step towards achieving sustainable development.

Influence on Project Design

By undertaking EIA as early as possible in the project cycle, the outcome of the EIA can be used to modify the project design, thereby reducing negative environmental impacts - the emphasis here being on avoiding problems, rather than mitigating their effects after they have occurred. By studying the natural resource base, and the possible impacts of a number of alternative project designs, EIA can even be used at the very beginning of the planning process to optimize project design, and even to maximize net positive environmental impacts.

Regional and Sectoral EIA

Although EIA is traditionally thought to apply at the project level, it can also be applied to geographic regions or to sectors such as energy, transportation, etc., or even programmes and policies. These developments in EIA are still relatively new, but hold great hope for EIA to be a major force in the achievement of sustainable development by establishing environmentally sound policies at the macro level before individual projects are designed or even proposed.

These examples illustrate a number of dimensions to EIA which are presently being developed, and all of which will enhance the capacity of EIA to be a major contributor to planning for sustainable development.

5. Challenges

In recent years, EIA tools have undergone important methodological advances and are now extensively applied by governments, industry and development institutions. Despite such advances, however, several challenges remain. These include: (i) the full integration of EIA at the earliest stage into policy, programme development and project planning; (ii) the need to integrate physical, socioeconomic and environmental assessment of programmes, policies and projects; and (iii) the principal objective of EIA, which is to focus on, and to be used, in promoting sustainable development and enhancing the capacity of developing countries in the application of EIAs and not only on the minimization of environmental degradation, but as a planning tool to achieve the optimum alternative.

In the follow-up to UNCED, there is a great need for EIA to focus on helping to set the groundwork for sustainable development, as well as pollution prevention and environmental degradation minimization. There is a need to translate the principles of sustainability into operational terms. Persistent challenges in integrating EIA also include: lack of indigenous capacities including, trained personnel and institutions; gap between theoretical models and practical, clear, coherent and relevant methodologies that can be applied at the country, sectoral and project-specific level; inclusion of monitoring in EIAs; gap between EIA procedures applied by donor countries and those applied by recipient countries; lack of coherence

and compatibility within the international donor community and the UN system; absence of relevant baseline environmental and socioeconomic data, particularly in developing countries; and lack of public participation.

The techniques developed for EIA are largely heavily data-dependant, an approach which typically does not lend itself to the developing country situation. On the other hand, techniques employing value judgement, experience of local communities, public participation, etc., which may be more appropriate for developing countries, where socioeconomic and socio-cultural impacts are often the greatest, are not so well developed.

In order to arrive at the environmental cost of a project, and to determine mitigating measures, it is necessary to be able to establish trade-offs between the various sectoral impacts, and between environmental impacts and project modification costs. This requires values to be assigned to environmental resources and changes in these resources. Further work is required in valuation methodologies to make this sort of analysis possible. This is also why EIA fails to incorporate cost-benefit analysis, and why the latter rarely incorporates environmental and social considerations.

In practical terms, EIA rarely takes account of broader socioeconomic factors related to economic development programmes and policies, as well as specific projects. Too often, assessments are undertaken as a policy appendage, initiated after core development components of a policy or project have been identified. A major challenge is to incorporate EIA into policy, programme and project design at the earliest planning stage. Reconciling competing physical, economic, ecological, social and other factors in development decision-making remains the key challenge in designing EIA tools towards development sustainability.

Just as EIA has tended to be an appendage in the planning process, so the socioeconomic component of EIA has tended to be appendaged to the rest of the EIA. With few linkages between socioeconomic and biophysical components, the socioeconomic implications of a project are frequently not adequately reflected in the EIA. Given the people are the very center of the process of sustainable development, this indicates that some further development is required in the EIA process. We are reminded of The Hague Symposium of 1991, which established a guiding principle. **"While environmental protection is vital, it is not an end in itself ... Every environmental measure must be tested against that yardstick: to what extent it adds to the human welfare of the majority of the world's population."** UNEP is committed to this principle, and to full public participation at all appropriate stages of the EIA.

Despite the adoption of EIA into the formal planning process by legislation and policy guidelines in many countries, EIA is still not practiced as widely as it should be. In some countries, EIA is regarded as an imposition by international financing institutions, with no role to play in day-to-day development planning. Through continuous assistance to these countries in institutional development and capacity-building, UNEP aims at narrowing the gap between the environmentalists and the decision-makers.

The administration and management of EIA, particularly in some developing countries, tends to be largely the domain of the international consultant, and is often flawed. Because EIAs are usually undertaken by consultants on fixed-price contracts, budgets are inflexible, and do not lend themselves to the exploratory nature of EIA. Local professionals involvement is constrained by local capacities. EIA practitioners may not be fully independent, being hired by project designers or contractors. This also raises the question of the independence of EIA, i.e. should the EIA be undertaken as a separate exercise, with its team having an essentially "audit" role, or be undertaken as an integral part of the overall planning and design of the project. All of these issues need to be addressed by the network of interested international agencies, including UNEP, if EIA is to achieve its full potential as an instrument for sustainable development.

The principal objective of EIA must be to focus on and to be used in promoting sustainable development and enhancing the capacity of developing countries in the practical application of EIA. There must be positive application of EIA - not only on the minimization of environmental degradation.

6. UNEP's EIA Programme

6.1 General

Having established the nature, objective and challenges in EIA applications, and having had a brief view of the ways in which it is contributing to sustainable development, we can now consider the contribution and role of UNEP. Basically, UNEP's task is to assist countries to fulfill their commitment to enhance the integration of EIAs into the planning process at the national level, as reflected in the Rio Declaration, Principle 17: **"Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority."**

Agenda 21 has specifically requested UNEP to include in its work the **"Further development and promotion of the widest possible use of environmental impact assessment, including activities carried out under the auspices of United Nations specialized agencies."**

A major focus of future work of UNEP as recommended by UNEP GC.17 is "to promote widespread use of environmental impact assessment (EIA) procedures by Governments and, where appropriate, international organizations as an essential element in development planning and for assessing the effects of potentially harmful activities on the environment."

Emphasis will also be laid on strengthening national capacities, promoting effective implementation of EIA and follow-up, including monitoring and assessment, and concentrating on providing practical, clear and concrete methodologies.

6.2 Objectives

The specific objectives of UNEP's EIA programme include:

- A. Promote the widest possible use of EIA procedures by governments and, where appropriate, international organizations and donor agencies as a development planning tool for achieving sound environmental management and sustainable development.
- B. Promote the further development of EIA as a practical and cost-effective tool for integrating environment and development in decision-making at the policy, programme, and project level, and enhance the capacities of developing countries and countries in transition to market economies in integrating EIA in the development planning process at the three levels.
- C. Ensure that EIA procedures advocated takes due account of the capabilities and socioeconomic conditions of developing countries and countries in transition to market economies, and reflect their needs.
- D. Promote and further develop techniques for the integration of physical, social, economic and environmental analysis and assessment of projects and programmes.
- E. Advance the understanding of how EIA of development projects, programmes and policies including risk assessment and cost-benefit analysis may be integrated into methods and procedures to strengthen decision-making for environmentally sound and sustainable development.

F. Promote the use of EIA as a continuing planning tool and the inclusion of monitoring and assessment and follow-up.

G. Promote and contribute to efforts leading to coherence of EIA procedures adopted by UN organizations, donor countries as well as developing countries and countries in transition to market economies.

H. Promote the methods and procedures of EIA as a tool for regional and international cooperation, particularly, in cases of activities and programmes likely to have transboundary effects.

6.3 Strategy

A. Strengthen collaboration with professional/academic associations, the scientific community, national governmental agencies, development assistance institutions, the United Nations system, and environmental administrations, transnational corporations, industry and NGOs to foster the further development of appropriate and integrated procedures and practices of EIA and associated economic appraisals and analysis leading to their testing and application in development planning in developing countries and countries in transition to market economies.

B. Build upon and elaborate, at the national, sub-regional and regional levels, existing national and international methods and procedures, taking into account the activities of business and industry, including transnational corporations, as well as non-governmental organizations.

C. Develop a constructive, working relationship with key UN and other international and national organizations dealing with EIA and other appraisal tools, by way of creating information exchange systems to keep relevant agencies informed, and involved in EIA.

D. Build capacity and develop skills for practical and cost-effective application of EIA and provide priority attention to development activities with major environmental impacts, in addition to overall capacity-building and development of skills for practical and cost-effective application of EIA.

E. Sponsor research and analytical publications, expert meetings and technical information service, in collaboration with international organizations, professional associations and recognized centers of research dealing with impact assessment and economic analysis of environmental and natural resource management, particularly on topics of practical significance to developing countries.

F. Promote the preparation of regional agreements and procedures on EIA, as appropriate.

G. Promote wide acceptance of the principle that public participation is a necessary element of EIA procedures.

6.4 Proposed Activities

The main focus of activities to be undertaken by UNEP is to provide assistance to developing countries and countries in transition to market economies in building, mobilizing and strengthening their EIA capacity, including the identification of EIA needs and procedures, institutional and human resources requirements, and elaboration of their national EIA legislation, methods and procedures, etc., through:

- (a) Initiating efforts leading to cross-sectoral understanding and agreement, regarding the usefulness of introducing and implementing EIA procedures for sound environmental management and national sustainable development, particularly amongst policy and decision makers;

- (b) Organizing national workshops to establish from the bottom up, the basic framework for a national EIA system and its linkages with other tools and economic instruments for environmental management and sustainable development;
- (c) Proposing options and modalities for the establishing of EIA procedures pertinent to the socioeconomic, political climate and institutional setup of the country in question, and identification of baseline data required for EIA;
- (d) Proposing options and modalities for the establishing of procedures for the integration of socioeconomic and physical assessment with EIA procedures;
- (e) Transformation of EIAs into law, or a regulation under an existing umbrella of environmental law;
- (f) Organizing a series of workshops/training courses to develop sectoral capabilities in using EIA in the energy sector, water resource development, transport networks, etc;
- (g) Developing EIA modules to be included in educational courses at various levels of education;
- (h) Developing a network of trained and knowledgeable government (national and local) and other personnel (NGOs, Universities, research institutes, parastatals, private sector) who have developed good relationships through repeated participation in capacity-building activities;
- (i) Creation of one or more "centers of excellence" to provide training and to function as a source of technical expertise and EIA information (reports, guidelines, technical papers, etc.);
- (j) Developing a methodology for public participation in the development and implementation of EIA procedures; and
- (k) Enhancing public awareness through media campaigns and training of journalists.

6.4.1 Training and Education

- (1) The preparation of educational and training material and curricula for administrators and decision makers as well as for project analysts at the various levels of education, particularly for institutes of higher education offering degree and other levels of qualification in engineering, management, economics, planning and ecologic/environmental sciences. Emphasis will be laid on the practical and cost-effective applications of EIA, CBA and related analytical tools, drawing upon available case study analyses. In order to achieve this, a survey of training programmes, courses and material identifying what works and what does not will be undertaken, and material prepared using input obtained from regional and national workshops.
- (2) Collaborate with universities and applied research institutions in establishing programmes of instruction and research in the application of EIA, CBA and related analytical tools to ascertain the environmental significance of development policies and programmes, and the socioeconomic significance of environmental change, with a view to informing and guiding the economic and environmental planning process.

6.4.2 Workshops

(1) The convening of regional workshops (South East Asia, Eastern and Central Africa, West Africa, Latin America and the Caribbean, Eastern and Central Europe) for EIA practitioners. Participants will be requested to prepare short position papers on EIA effectiveness and suggestions for improvement. The outcome of such workshops will help identify training needs as well as what works and what does not in EIA applications, improving EIA practices, promote South-South and regional cooperation, exchange of experience among developing countries, identify their needs in EIA applications, etc. The first in the series of these workshops was held in March 1994 for Eastern and Central African countries and second will be held prior to the IAIA Annual Conference during the second quarter of 1995 for Latin American countries.

(2) The convening of workshops in order to prepare recipient countries, particularly those receiving a large percentage of ODA, to respond to the changing world of ODA and to promote coherence between developing countries. Participants will mainly be targeted for ODA counterparts i.e., administrators in developing countries. A workshop is planned to be held in Nairobi during the third quarter of 1994, organized in consultation with the Development Assistance Committee of the Organization for Economic Cooperation and Development (OECD/DAC) and CIDA.

6.4.3 EIA Procedures

(1) Undertake a review and analysis of information obtained from relevant institutions, with the intent of (i) identifying differences in methodologies, (ii) highlighting different strengths and weaknesses, (iii) highlighting specific modes of application, (iv) providing recommendations on different EIA applications, related to policy, programme development and project criteria.

(2) Prepare an **"EIA best practices"** based on the comparative analyses of existing guidelines, and experience in the application of EIAs and different modes of application. The **"EIA best practices"** would need to be practical, detailing key elements of best practices in EIA for sustainable development, and taking into account the special needs of developing countries and countries in transition to market economies. The **"EIA best practices"** will be aimed at policy makers and managers involved in EIA.

(3) Prepare a series of publications to supplement the **"EIA best practices"** containing country case-studies in developed and developing countries, focussing on clear examples of EIAs that have worked, that have not, and that can be duplicated, and showing advantages of EIA, its failures and weaknesses and consequences of not doing EIAs. The case studies will include a critique and commentary by reviewers. Case studies will focus mainly on developing country experiences. Studies will concentrate on public participation practices in developing countries, and lessons learned from developing country input in EIAs, in terms of local expertise. The publication will be beneficial in providing more assistance, particularly, to middle level managers involved in EIA implementation and preparation of reports.

(4) Prepare a glossary of terminologies and concepts used in EIA and related methodologies and tools for environmental management and sustainable development to be used by EIA practitioners in developed, developing countries, and countries in transition to market economies.

6.4.4 Case Study Analysis and Surveys

(1) Undertake a survey in developing countries of existing experience, training facilities, institutional and legal structures of EIA procedures and policies in order to assist in the identification of gaps for the practical and cost-effective application of EIA, including continuous monitoring and follow-up.

(2) Undertake a search to find examples where EIA results have been incorporated into CBA framework and analyze the effectiveness of such integration. Any case study material showing how this has been done effectively could be annexed to the "EIA best practices". This work will be supplemented by a programme of study, developed in consultation with the World Bank and other development assistance institutions, aimed at determining the extent to which it is feasible to directly integrate CBA with EIA.

(3) Undertake case study analysis on the use of EIA in development activities with major environmental impacts at both national and global levels and in regions with major development activities, in close collaboration with international development institutions and specialized agencies of the United Nations system and governments with a view to developing and promoting an environmentally-sensitive approach to economic and sectoral policy advice. These could include transboundary effects of programmes and activities, the environmental impacts of trade and trade agreements, structural adjustment programmes and economic reform policy packages, as implemented in a few selected countries.

(4) Test and demonstrate, in collaboration with UNDP, a consistent approach to the application of EIA and environmental management procedures in the elaboration and implementation of Country Programmes in a few selected countries, with the intention of making available a set of a widely acceptable procedures based on such practical application to users including governments and UNDP Resident Representatives' offices.

6.4.5 Networking

(1) Create a network of EIA practitioners, including those involved in EIA work in developing countries which will enhance the knowledge and understanding of the use of EIA for environmental management and sustainable development.

6.4.6 Database

(1) Establish a database on EIA/CBA methodologies and applications and the "EIA best practices" and specific experiences in EIA and CBA use for developing countries and countries in transition to market economies, and international and national institutions. The database will consist of guidelines and a comparative analysis between them compiled from the coordinated inputs obtained from UN organizations, research and academic institutions, multilateral and bilateral development assistance institutions and other international and national organizations. It will also include past experience of EIA and CBA applications, how EIA and CBA are used in decision-making and planning processes and update work in EIA methodology. This will be complemented with a library on EIA and CBA documentation.

MODULE 3
NEW DEVELOPMENTS IN ENVIRONMENTAL LAW AND
INSTITUTIONS

- A. Trade and Environment
- B. The Promotion of Cleaner Technology and the Establishment of Industrial Inspectorate;
- C. UNEP's Regional Seas Programme
- D. The Global Environmental Facility

**A.1. PRESENTATION OUTLINE (PART 1):
INTERNATIONAL LEGAL ASPECTS OF TRADE AND ENVIRONMENT ISSUES**

Presented by:
Mr. B. Ogolla
Programme Officer
National Legislation and Institutions
Environmental Law and Institutions
Programme Activity Centre, UNEP

- A.1.1. Introduction
- A.1.2. GATT law and environmental protection
 - a) The facilitative aspects of GATT law
 - i) National Environmental Protection Measures
 - ii) The Article XX Exceptions
 - b) The GATT constraints to environmental protection
 - i) Influencing other countries environmental policies
 - ii) Technical barriers to trade
 - iii) Environmental subsidies
- A.1.3. Trade measures in multilateral environmental agreement
 - a) A strict interpretation of the GATT
 - b) A broader interpretation of the GATT

A.1. PRESENTATION OUTLINE (PART 2)
INTERNATIONAL LEGAL ASPECTS OF TRADE AND ENVIRONMENT ISSUES

The Trade and Environmental Debate: Recent Developments

Presented by:
Mr. L. Gundling, with the assistance
of Mr. R. Tarasovsky
Environmental Law Centre, IUCN

- A.1.1. Environment protection and trade restrictions
- A.1.2. The GATT
 - (a) Articles I, III and XI
 - (b) Article XX: Exceptions
- A.1.3. European Community and Union environmental policy
 - (a) Principle of free trade in goods and services
 - (b) Exception
- A.1.4. The Mexico/US Tuna case
- A.1.5. Trade and environment at Rio
 - (a) Rio Declaration (Principle 12)
 - (b) Agenda 21 (Chapter 2)
- A.1.6. North American Free Trade Agreement (NAFTA), and NAFTA "Side Agreement" on environmental cooperation, 1993.
- A.1.7. OAU/African Economic Community Environmental Provisions
- A.1.8. The GATT Uruguay Round environmental issues
 - a) Elimination of non-tariff barriers, including environment protection requirements
 - b) Liberalization of trade in agricultural goods
 - c) Elimination and prevention of subsidies

A.1. THE TRADE AND ENVIRONMENT DEBATE

by:

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The paper first presented the relevant articles of the GATT and outlined the controversial debate about their contents. It then summarized major recent developments in the field, such as the Mexico/US Tuna case; NAFTA; the European Internal Market, regional economic integration initiatives in Africa, and the Uruguay Round of the GATT. The paper concluded that major developments are currently going on in the area of international trade and that there is no guarantee yet that environmental considerations are adequately taken into account. Rules to ensure an environmentally friendly international trade still have to be developed.

A.2. TRADE AND ENVIRONMENT

Provide a legal opinion, based on the relevant GATT provisions, concerning the dispute between Austria and the ASEAN countries.

The Case of the Austrian Tropical Timber Label

I. Austria recently came up with a mandatory label programme for tropical timber products. All commercial timber, according to this program, must have a label displaying the inscription "made from tropical timber" or "contains tropical timber." The legislation also provided for the use of an additional voluntary, quality mark "from sustainable forest management," which may be used for tropical timber originating from forests that meet certain "effective exploitation" standards. While use of the labels was mandatory, that of the quality mark was not.

II. The major exporters of tropical timber are Indonesia and Malaysia. The ASEAN countries have raised the question of GATT consistency of the Austrian measure. In their view, neither the mandatory label requirement nor the voluntary quality mark are consistent with the GATT.

The Mandatory Label

III. The ASEAN countries argue that the Austrian legislation has been adopted with the exception that it would result in decreased imports of tropical timber (which is not produced in Austria). The mandatory labelling requirements, they argue, constitute de facto import restrictions which are not permitted under GATT Article XI. The ASEAN countries take the view that labelling requirements could not be justified under the exceptions provided in Article XI, paragraph 2 (which permits certain import restrictions which are necessary for the application of standards or regulations for the classification, upgrading or marketing of commodities in international trade), since they could not be considered as being "necessary" for marketing commodities in international trade.

V. The ASEAN countries further argue that the labelling requirements cannot be justified under the general exceptions provided under Article XX subparagraph (g), which permits the use of trade restrictions which are necessary for the conservation of exhaustible natural resources. This provision is intended to allow countries to adopt under certain conditions, trade restrictions which are appropriate for the conservation of their natural resources. This provision cannot be invoked to justify measures which have the primary objectives to impose policies for conservation of natural resources or other environmental policies on the exporting countries, which are appropriate and desirable in the view of the importing country.

The Voluntary Quality Mark

VI. The ASEAN countries have also pointed out that quality mark requirements, although not mandatory, is an attempt by Austria to unilaterally decide what constitutes sustainably managed forests, while there is still no international consensus on the criteria and determination of sustainable managed forests. The quality marking requirements, by giving the negative connotation that tropical timber originates in forests which are generally not managed in a sustainable way, could persuade consumers to reduce the use of such timber and products produced from it.

VII. The ASEAN countries argue that the quality mark requirements could be considered as a form of certification system to which the provisions of Article 7 of the TBT Agreement applies. Paragraph 1 of Article 7, *inter alia*, requires that the certification systems are applied in such away as to ensure that they do not have the effect of creating unnecessary obstacles to trade. If the conditions that have to be fulfilled to obtain the right to use the mark are not based on objective and scientific considerations, or if the

conditions stipulated are difficult to meet, the application of the system could be considered as creating an obstacle to trade. In the Austrian legislation, the determination as to whether the forest areas in the exporting countries are sustainably managed would be made by the Austrian authorities, on the basis of criteria unilaterally determined by them.

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THE TRADE-AND-ENVIRONMENT DEBATE: RECENT DEVELOPMENTS

by:

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Abstract/Summary

The relationship between trade and environment is not a new issue, although it was only recently that it attracted widespread public attention. The tensions between the principle of free international trade on the one hand, and the need to protect the environment on the other, have been known for a long time and are reflected in existing international law, e.g. in Article XX of the General Agreement on Tariffs and Trade (GATT), or in Article 36 of the treaty of debate establishing the European Economic Community.

For trade and environment issues of major importance are Articles I, III, XI and XX of the GATT. Article I contains the most-favoured nations clause; Article III prohibits that taxes and other regulations are applied with the intention to protect domestic production; and Article XI provides for the prohibition and elimination of all quantitative restrictions. Article XX contains several exceptions to these rules. States are allowed, *inter alia*, to take measures to protect human, animal or plant life or health, provided these measures are not arbitrary or unjustifiable discrimination. Similarly, the EEC Treaty establishes the principle of free trade in Article 30 but allows for trade restrictions based on public health considerations. In addition, the EEC, since the beginning of the 1970s, has developed a common environmental policy which may involve restriction on trade.

New developments in the field of trade and environment concern the US-Mexican Tuna case; the establishment of the North America Free Trade Agreement (NAFTA); the discussion of the issue at the Rio Conference and the Uruguay Round of GATT. In the Tuna Case, a GATT panel concluded that national restrictions on international trade motivated to protect the global commons (living resources of the high seas) are not in conformity with GATT. The NAFTA 1992 contains several basic provisions on environment protection; they are regulated in more detail in a side agreement on environmental cooperation adopted in 1993. Principle 12 of the Rio Declaration is much in line with the reasoning behind the Tuna case opinion: "Economic growth and sustainable development" should be promoted, while "arbitrary and unjustifiable discrimination or a disguised restriction on international trade" should be avoided. At the Uruguay Round Negotiations, environmental issues were raised in the discussion about the elimination of non-tariff barriers, the liberalization of trade in agricultural goods, or the elimination and prevention of subsidies. The Uruguay Round did not resolve the problems; this remains a task for future negotiations.

ENVIRONMENTAL INSTITUTIONS OPTIONS AND TRENDS

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Abstract/Summary

There is a great variety of environmental institutions throughout the world. It is only possible to present basic options to the solution of the institutional problem.

Option (1) is the inclusion of environmental departments in line ministries. Several departments take care of environmental problems and natural resources conservation. Problems may arise as to coordination within the environmental sector, as well as coordination between the environmental sector and other sectors.

Coordination has to be ensured by cabinet or the head of government. From an environmental point of view, this option is acceptable if the line ministries are committed to environment protection which, however, is not always the case.

Option (2) is the establishment of a separate ministry for the environment which would be equal to other line ministries. The advantage would be the coordinated and harmonized approach to environmental matters; difficulties will remain as to the integration of environmental policy in other policies which will be the task of the cabinet or the head of government.

Option (3) is the independent agency linked directly to the head of government. The independent environmentally agency would have a somewhat higher standing than other units in government; its influence in government will, to a large extent, depend on the environmental commitment of the head of government.

Option (4) is the establishment of an environmental council and an environmental protection agency (EPA). The council would be either a council of ministries or a mixed governmental and non-governmental body. Division of responsibilities between the two bodies would be crucial. The Council would generally adopt policies and rules, and would coordinate within government. EPA generally would enforce policies and laws and would take care of the every day task of environmental protection. Seen from an environmentalist perspective, this option is attractive; it may, however, also be complicated and costly.

LEGAL ASPECTS OF ENVIRONMENTAL PLANNING

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Abstract/Summary

Planning is a tool of environmental policy used in many countries; it is far from outdated. In a number of countries, overall and comprehensive environmental plans are currently being prepared; they may be prepared either at national or regional level. In addition to these comprehensive plans, sectoral environmental plans (water resources, waste management, forestry, protected areas, air pollution control, etc.) at all governmental levels may be developed. It is essential that plans, whatever their scope, are prepared in an open participatory process involving all interested governmental and non-governmental institutions. Procedures, however, may be different with respect to the various types of plans for governmental levels, where plans are prepared.

Another basic requirement for effective environmental planning is the integration of environmental plans in development planning. Even the best conservation plan may be useless if it is not respected in decision-making procedures. On the other hand, environmental planning should be realistic which implies that environmental planning should not ignore considerations of development. The secret of good planning probably is the wise balancing of environmental and development aspects.

Environmental planning involves many legal issues which have to be addressed in environmental laws, both general laws and sectoral laws. Law should decide whether there is governmental discretion; the answer may be different with regard to different types of plans. Planning principles and planning procedures should be harmonized, which implies that these aspects should be regulated in general (basic) laws. A basic issue concerns the legal nature of the plans; it is important that the laws decide on their normative quality (binding or non-binding; laws may differentiate as to different types of plans).

The law must decide on how environmental planning is integrated in development planning, and it must address how conflicts are resolved. Countries, in general, do not provide that environmental planning is given priority. In most jurisdictions, planning authorities are required to consider the extent of the discretion of the respective authorities. Planning decisions should, in principle, be subject to judicial review; it is, however, important to respect the discretion which may be given to authorities. This would restrict judicial reviews to procedural aspects.

LEGAL ASPECTS OF INTERNATIONAL TRADE & ENVIRONMENTAL PROTECTION

CASE STUDY

The Tuna/Dolphin Case: Mexico vs. US

The Mexico-US dispute arose in 1990 over import bans by the US on certain yellowfin tuna fish and products harvested by Mexican vessels in the Eastern Tropical Pacific Ocean (ETP) and similar products from other "intermediary nations" importing such products from Mexico. These bans were imposed under the US Marine Mammal Protection Act (MMPA) 1972, which requires a general prohibition of "taking" and importation into the United States of Marine mammals, except where an exception is explicitly authorized. The MMPA contains special provisions applicable to tuna caught in the ETP. These provisions govern the taking of marine mammals incidental to harvesting of yellowfin tuna in the ETP, as well as importation of yellowfin tuna and tuna products harvested in the ETP. The MMPA and its implementing regulations include extensive provisions regarding commercial tuna fishing in the ETP, particularly the use of purse-seine nets to encircle dolphin in order to catch tuna beneath. In August, 1990, the US Government imposed an embargo, pursuant to a court order, on imports of commercial yellowfin tuna and yellowfin tuna products harvested by Mexican vessels in the ETP using purse-seine nets, which resulted in the incidental killing of dolphins. In May 1991, the US Government imposed an import ban on intermediary nations (Costa Rica, France, Italy, Japan and Panama) under section 101 (a) 2(c) of the MMPA.

On 25 January 1991, Mexico requested the GATT contracting parties to establish a panel under Article XXIII: 2 to examine the matter reserved the right to be heard by the Panel as interested states.

The Issue

The major issue before the Panel was to determine whether the measures imposed by the US on Mexico and "intermediary nations" under the MMPA were consistent with the GATT.

The US argued:

1. That the measures imposed under the MMPA with respect to certain domestic yellowfin tuna from Mexico were internal regulations affecting the sale, offering for sale, purchase transportation, distribution or use of tuna and tuna products consistent with Article III: 4; and
2. That even if these measures are not consistent with Article II, they were covered by the exceptions in Article XX(b) and XX(g).

The Findings of the Panel

A. INTRODUCTION

1.1 The Panel noted that the issues before it arose essentially from the following facts: the Marine Mammal Protection Act (MMPA) regulates, *inter alia*, the harvesting of tuna by United States fishermen and others who are operating within the jurisdiction of the United States. The MMPA requires that such fishermen use certain fishing techniques to reduce the taking of dolphin incidental to the harvesting of fish. The United States authorities have licensed fishing of yellowfin tuna by United States vessels in ETP on the condition that the domestic fleet not exceed an incidental taking of 20,500 dolphins per year in the ETP.

1.2. The MMPA also requires that the United States government ban the importation of commercial fish or products from fish caught with commercial fishing technology which results in the incidental killing or incidental serious injury of ocean mammals in excess of United States standards. As a condition of access to the United States market for the yellowfin tuna or yellowfin tuna products caught by its fleet, each country of registry of vessels fishing yellowfin tuna in the ETP must prove the satisfaction of the United States authorities that its overall regulatory regime regarding the taking of marine mammals is comparable to that of the United States. To meet this requirement, the country in question must prove that the average rate of incidental taking of marine mammals by its tuna fleet operating in the ETP is not in excess of 1.25 times the average incidental taking rate of United States vessels operating in the ETP during the same period. The exact methods of calculating and comparing these average incidental taking rates have been specified by regulation.

1.3. The Panel decided to examine successively:

- (a) the prohibition of imports of certain yellowfin tuna and certain yellowfin tuna products from Mexico imposed by the United States and the provisions of the MMPA on which it is based: and
- (b) the prohibition of imports of certain yellowfin tuna and certain yellowfin tuna products from "intermediary nations", imposed by the United States and the provisions of the MMPA on which it is based.

B. PROHIBITION OF IMPORTS OF CERTAIN YELLOWFIN TUNA AND CERTAIN YELLOWFIN TUNA PRODUCTS FROM MEXICO - CATEGORIZATION AS INTERNAL REGULATIONS (ARTICLE III) OR QUANTITATIVE RESTRICTIONS (ARTICLE XI)

1.4 The Panel noted that Mexico had argued that the measures prohibiting imports of certain yellowfin tuna and yellowfin tuna products from Mexico imposed by the United States were quantitative restrictions on importation under Article XI, while the United States had argued that these measures were internal regulations enforced at the time or point of importation under Article III: 4 and the Note Ad Article III, namely that the prohibition of imports of tuna and tuna products from Mexico constituted an enforcement of the regulations of the MMPA relating to the harvesting of domestic tuna.

1.5 The Panel examined the distinction between quantitative restrictions on importation and internal measures applied at the time or point of importation, and noted the following. While restrictions on importation are prohibited by Article XI: 1, contracting parties are permitted by Article III: 4 and the Note Ad Article III to impose an internal regulation on products of other Contracting Parties provided that it does not discriminate between products of other countries in violation of the most-favoured-nation principle of Article I: 1; is not applied so as to afford protection to domestic production, in violation of the national treatment principle of Article III: 1; and accords to imported products treatment no less favorable than that accorded to like products of national origin, consistent with Article III: 4. The relevant text of Article III: 4 provides:

"The products of the territory of any contracting party imported into the territory of any other contracting party shall be accorded treatment no less favorable than that accorded to like products of national origin in respect of all laws, regulations and requirements affecting their internal sale, offering for sale, purchase, transportation, distribution or use".

The Note Ad Article III provides that:

"Any internal tax or other internal charge, or any law, regulation or requirement of the kind referred to in [Article III:1] which applies to an imported product and the like domestic product and is collected or enforced in the case of the imported product at the time or point of importation, is nevertheless to be regarded as an internal tax or other internal charge, or a law, regulation or requirement of the kind referred to in [Article III: 1] and is accordingly subject to the provisions of Article III".

1.6 The text of Article III: 1 refers to the application to imported or domestic products of "laws, regulations and requirements affecting the internal sale ... of products" and "internal quantitative regulations requiring the mixture, processing or use of products;" it sets forth the principle that such regulations on products not be applied so as to afford protection to domestic production. Article III: 4 refers solely to laws, regulations and requirements affecting the internal sale, etc. of products. This suggests that Article III covers only measures affecting products as such. Furthermore, the text of the Note Ad Article III refers to a measure "which applies to an imported product and the like domestic product and is collected or enforced in the case of the imported product at the time or point of importation." This suggests that this Note covers only measures applied to imported products that are of the same nature as those applied to the domestic products, such as a prohibition on importation of a product which enforces at the border an internal sales prohibition applied to both imported and like domestic products.

1.7 The Panel concluded from the above considerations that the Note Ad Article III covers only those measures that are applied to the product as such. The Panel noted that the MMPA regulates the domestic harvesting of yellowfin tuna to reduce the incidental taking of dolphin, but that these regulations could not be regarded as being applied to tuna products as such because they would not directly regulate the sale of tuna and could not possibly affect tuna as a product. Therefore, the Panel found that the import prohibition on certain yellowfin tuna and certain yellowfin tuna products of Mexico and provisions of the MMPA under which it is imposed did not constitute internal regulations covered by the Note Ad Article III.

1.8 The Panel further concluded that, even if the provisions of the MMPA enforcing the tuna harvesting regulations were regarded as regulating the sale of tuna as a product, the United States import prohibition would not meet the requirements of Article III. Article III: 4 calls for a comparison of the treatment of imported tuna as a product with that of domestic tuna as a product. Regulations governing the taking of dolphins incidental to the taking of tuna could not possibly affect tuna as a product. Article III: 4 therefore obliges the United States to accord treatment to Mexican tuna no less favorable than accorded to United States tuna, whether or not the incidental taking of dolphins by Mexican vessels corresponds to that of United States vessels.

Article XI and XIII

1.9 The Panel noted that the United States had, as mandated by the MMPA, announced and implemented a prohibition on imports of yellowfin tuna and yellowfin tuna products caught by vessels of Mexico with purse-seine nets in the ETP. The Panel further noted that under United States customs law, fish caught by a vessel registered in a country was deemed to originate in that country, and that this prohibition therefore applied to imports of products of Mexico.

1.10. The Panel noted that under the General Agreement, quantitative restrictions on imports are forbidden by Article XI: 1, the relevant part of which reads:

"No prohibitions or restrictions ... whether made effective through quotas, import, or export licenses or other measures, shall be instituted or maintained by any contracting party on the importation of any product of the territory of any other contracting party..."

The Panel therefore found that the direct import prohibition on certain yellowfin tuna and certain yellowfin tuna products from Mexico and the provisions of the MMPA under which it is imposed were inconsistent with Article XI: 1. The United States did not present to the Panel any arguments to support a different legal conclusion regarding Article XI.

C. THE EXCEPTIONS UNDER ARTICLE XX

General

1.11 The Panel noted that the United States had argued that its direct embargo under the MMPA could be justified under Article XX(b) or Article XX(g), and that Mexico had argued that a contracting party could not simultaneously argue that a measure is compatible with the general rules of the General Agreement and invoke Article XX for that measure. The Panel recalled that previous panels had established that Article XX is a limited and conditional exception from obligations under other provisions of the General Agreement, and not a positive rule establishing obligations in itself. Therefore, the practice of panels has been to interpret Article XX narrowly, to place the burden on the party invoking Article XX to justify its invocation, and not to examine Article XX exceptions unless invoked. Nevertheless, the Panel considered that a party to a dispute could argue in the alternative that Article XX might apply, without this argument constituting *ipso facto* an admission that the measures in question would otherwise be inconsistent with the General Agreement. Indeed, the efficient operation of the dispute settlement process required that such arguments in the alternative be possible.

Article XX(b)

1.12 The Panel noted that the United States considered the prohibition of imports of certain yellowfin tuna and certain yellowfin tuna products from Mexico, and the provisions of the MMPA on which this prohibition is based, to be justified by Article XX(b) because they served solely the purpose of protecting dolphin life and health and were "necessary" within the meaning of that provision because, in respect of the measure reasonably available to the United States to achieve this objective. Mexico considered that Article XX(b) was not applicable to a measure imposed to protect the life or health of animals outside the jurisdiction of the contracting party taking it and that the import prohibition imposed by the United States was not necessary because alternative means consistent with the General Agreement were available to it to protect dolphin lives or health, namely international cooperation between the countries concerned.

1.13 The Panel noted that the basic question raised by these arguments, namely whether Article XX(b) covers measures necessary to protect human, animal or plant life or health outside the jurisdiction of the contracting party taking the measure, is not clearly answered by the text of that provision. It refers to life and health protection generally without expressly limiting that protection to the jurisdiction of the contracting party concerned. The Panel therefore decided to analyze this issue in the light of the drafting history of Article XX(b), the purpose of this provision, and the consequences that the interpretations proposed by the parties would have for the operation of the General Agreement as a whole. After examining the history of Article XX(b) the Panel concluded that, the record indicates that the concerns of the drafters of Article XX(b) focused animals or plants within the jurisdiction of the importing country.

1.15 The Panel further noted that Article XX(b) allows each contracting party to set its human, animal or plant life or health standards. The conditions set out in Article XX(b) which limit resort to this exception, namely the measure taken must be "necessary" and not "constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade", refer to the trade measure requiring justification under Article XX(b), not however to the life or health standard chosen by the contracting party. The panel recalled the finding of a previous panel that this paragraph of Article XX was intended to allow contracting parties to impose trade restrictive measures inconsistent with the General Agreement to pursue overriding public policy goals to the extent that such inconsistencies were unavoidable. The Panel

that is the broad interpretation of Article XX(b) suggested by the United States were accepted, each contracting party could unilaterally determine the life or health protection policies from which other contracting parties could not deviate without jeopardizing their rights under the General Agreement.

1.16 The Panel considered that the United States measures, even if Article XX(b) were interpreted to permit extra jurisdiction protection of life and health, would not meet the requirement of necessity set out in that provision. The United States had not demonstrated to the panel - as required of the party invoking an Article XX exception - that it has exhausted all options reasonably available to it to pursue its dolphin protection objectives through measures consistent with the General Agreement, in particular through the negotiation of international cooperative arrangements, which would seem to be desirable in view of the fact that dolphins roam the waters of many States and the high seas.

1.17 On the basis of the above considerations, the Panel found that the United States' direct import prohibition imposed on certain yellowfin tuna and certain yellowfin tuna products of Mexico and the provisions of the MMPA under which it is imposed, could not be justified under the exception in Article XX(b).

Article XX(g)

The Panel proceeded to examine whether the prohibition on imports of certain yellowfin tuna and certain yellowfin tuna products from Mexico and the MMPA provisions under which it was imposed could be justified under the exception in Article XX(g). The Panel noted that the United States, in invoking Article XX(g) with respect to its direct import prohibition under the MMPA, had argued that the measures taken under the MMPA are measures primarily aimed at the conservation of dolphins, and that the import restrictions on certain tuna and tuna products under the MMPA are "primarily aimed at reducing effective restrictions on domestic production or consumption" of dolphins. The Panel also noted that Mexico had argued that the United States measures were not justified under the exception in Article XX(g) because, *inter alia*, this provision could not be applied extra jurisdictionally.

1.19 The Panel noted that Article XX(g) required that the measures relating to the conservation of exhaustible natural resources be taken "in conjunction with restrictions on domestic production or consumption". A previous panel had found that a measure could only be considered to have been taken "in conjunction with" production restrictions "if it was primarily aimed at rendering effective these restrictions". A country can effectively control the production or consumption of an exhaustible natural resource only to the extent that the production or consumption is under its jurisdiction. This suggests that Article XX(g) was intended to permit contracting parties to take trade measures primarily aimed at rendering effective restrictions on production or consumption within their jurisdiction.

1.20 The Panel further noted that Article XX(g) allows each contracting party to adopt its own conservation policies. The conditions set out in Article XX(g) which limit resort to this exception, namely that the measures taken must be related to the conservation of exhaustible natural resources, and that they not "constitute a means of arbitrary or unjustifiable discrimination...or a disguised restriction on international trade" refer to the trade measure requiring justification under Article XX(g), not however to the conservation policies adopted by the contracting party. The Panel considered that if the extra jurisdiction interpretation of Article XX(g) suggested by the United States were accepted, each contracting party could unilaterally determine the conservation policies from which other contracting parties could not deviate without jeopardizing their rights under the General Agreement. The considerations that led the panel to reject an extra jurisdictional application of Article XX(b) therefore apply also to Article XX(g).

1.21 On the basis of the above considerations, the Panel found that United States import prohibition on certain yellowfin tuna and certain yellowfin tuna products of Mexico directly imported from Mexico, and the provisions of the MMPA under which it is imposed, could not be justified under Article XX(g).

D. SECONDARY EMBARGO ON IMPORTS OF CERTAIN YELLOWFIN TUNA AND CERTAIN YELLOWFIN TUNA PRODUCTS FROM "INTERMEDIARY NATIONS" UNDER THE MMPA

Article III and XI

1.22 The Panel noted that Mexico had claimed that the "intermediary nations" embargo was inconsistent with Articles XI and XIII. The United States considered that these measures fell instead under Article III and the Note Ad Article III, as they provided for enforcement of requirements for yellowfin tuna harvested in the ETP using purse-seine nets. The Panel found that since the United States domestic regulation on tuna harvesting were not applied to tuna as a product, the "intermediary nations" embargo did not fall within the scope of the Note Ad Article III, and was therefore a quantitative restriction subject to Article XI.

1.23 The Panel further noted that the MMPA required that the United States authorities implement a prohibition on imports of yellowfin tuna and yellowfin tuna products from "intermediary nations," and that the United States was refusing entry to yellowfin tuna unless the importer declared that no yellowfin tuna or tuna products in the shipment were harvested with purse-seine nets in the ETP by vessels of Mexico. The Panel therefore found that these measures and the provisions of the MMPA mandating such an embargo were import restrictions or prohibitions inconsistent with Article XI: 1. The United States did not present to the Panel any arguments to support a different legal conclusion regarding Article XI.

Article XX(b) and XX(g)

1.24 The Panel noted that the United States had argued that the intermediary nations embargo was justified as a measure under Article XX(b) and XX(g) and found that the considerations that led the panel to reject the United States invocation of these provisions in that instance applied.

E. THE PANEL'S VISION OF THE TRADE/ENVIRONMENT INTERFACE

1.25 The panel wished to note the fact, made evident during its consideration of this case, that the provisions of the General Agreement impose few constraints on contracting party's implementation of domestic environmental policies. The panel recalled its finding that under these provisions, a contracting party is free to tax or regulate imported products and like domestic products as long as its taxes or domestic producers, and a contracting party is also free to tax or regulate domestic production for environmental purposes. As a corollary to these rights, a contracting party may not restrict imports of a product merely because it originates in a country with environmental policies different from its own.

1.26 The Panel further recalled its finding that the import restriction examined in this dispute, imposed to respond to differences in environmental regulation of producers, could not be justified under Article XX(b) or XX(g). These exceptions did not specify criteria limiting the range of life or health protection policies, or resources conservation policies, for the sake of which they could be involved. It seemed evident to the panel that, if the CONTRACTING PARTIES were to permit import restrictions in response to differences in environmental policies under the General Agreement, they would need to impose limits on the range of policy differences justifying such responses and to develop criteria so as to prevent abuse. If the CONTRACTING PARTIES were to decide to permit trade measures of this type in particular circumstances it would therefore be preferable for them to do so not by interpreting Article XX, but amending or supplementing the provisions of the General Agreement or waiving obligations thereunder. Such an approach would enable the CONTRACTING PARTIES to impose such limits and develop such criteria.

1.27 These considerations led the Panel to the view that the adoption of its report would affect neither the rights of individual contracting parties to pursue their internal environment policies and to co-operate with one another in harmonizing such policies, nor of the CONTRACTING PARTIES acting jointly to address international environmental problems which can be resolved through measures in conflict with the present rules of the General Agreement.

F. THE PANEL'S CONCLUSIONS

1.28 (a) The prohibition of imports of certain yellowfin tuna and certain yellowfin tuna products of Mexico and the provisions of the Marine Mammals Protection Act which it is imposed are contrary to Article XI: 1 and are not justified by Article XX(b) or Article XX(g).

(b) The import prohibition imposed by the United States with regard to certain yellowfin tuna and certain yellowfin tuna products of "intermediary nations" and the provisions of the Marine mammal protection act under which they are imposed are contrary to Article XI: 1 and are not justified by Article XX(b), or XX(g).

(c) The Panel recommends that the CONTRACTING PARTIES request the United States to bring the above measures into conformity with its obligations under the General Agreement.

**UNEP/UNITAR TRAINING PROGRAMME IN ENVIRONMENTAL LAW AND
POLICY**

NOVEMBER - DECEMBER 1993

INTERNATIONAL LEGAL ASPECTS OF TRADE AND ENVIRONMENT ISSUES:

I. Introduction:

The interface of trade and environment is increasingly attracting international concern. This pre-occupation arises out of a growing recognition of important linkages between international trade and environmental issues. These linkages manifest themselves in, at least, three different ways.⁷ First, national environmental policies are likely to affect international competitiveness. Environmental policy instruments such as taxes, subsidies, standards and other regulations can have an important impact on the fortunes of domestic producers in world markets. On the other hand, policy-makers may view restrictions on imports and exports as important facets of national environmental policy. The effect of such restrictions is to create new barriers to international trade. For example, imports produced under less stringent environmental standards may be prohibited from domestic markets. There is indeed real concern that the environmental agenda may form a new wave of protectionism, particularly in countries with large domestic markets.⁸

Secondly, there is the realization that trade and trade policies inevitably have an impact on the environment. To some analysts, international trade and liberal trade policies worsen environmental problems by expanding consumption. According to Shrybman,⁹ for example, trade liberalization necessarily implies limited control over natural resources, reduction of pollution control costs through deregulation to maintain international competitiveness, and an open-door policy to imported polluting processes and products. To others, however, enhanced international trade is an instrument for generating and mobilizing the financial and technological resources needed to implement adequate environmental policies.¹⁰

Lastly, promoters of international environmental agreements are increasingly having recourse to trade policies as appropriate incentives (or sanctions) for securing multilateral cooperation essential for dealing with transboundary and global environmental concerns. Trade provisions have thus become important elements in international environmental legal instruments. The question of the consistency of such provisions with the existing multilateral rules of international trade contained in the General Agreement on Tariffs and Trade (GATT) has naturally arisen.

During the United Conference on Environment and Development (UNCED), the issues of trade and environment and the role of the GATT in this domain were raised in Agenda 21, the Rio Declaration and the Forestry Principles. In addition, important trade provisions were incorporated in the two Conventions, Climate Change and Biological Diversity, opened for signature at the Conference.

⁷ See Anderson, K. and R. Blackhurst (eds), The Greening of World Trade Issues, Harvester Wheatsheaf, London, 1992, p.5.

⁸ Ibid, P.5.

⁹ Shrybman, S., "International Trade and the Environment: An Assessment of the General Agreement on Tariffs and Trade", (1990) 30(1) The Ecologist 30-34

¹⁰ See, for example, the Statement of the GATT Director General to UNCED in GATT, Press Release, GATT, Geneva, 11 June 1992, P.4.

These developments have brought into sharp focus two important legal questions: first, the sensitivity of the GATT framework to environmental issues and, secondly, the consistency of trade provisions in multilateral environmental agreements with international trade regulations.

II. GATT Law and Environmental Protection:

It has been asserted that GATT law is largely insensitive to the imperatives of environmental protection.¹¹ This characterization is often justified on two basic grounds: first, that environmental protection was not a public issue in 1947 when the major GATT provisions were adopted and, secondly, that the environment has remained an externality, rarely taken into consideration in the process of subsequent multilateral trade negotiations. This view is not entirely correct. Whereas the GATT framework imposes specific constraints to the use of trade policies to achieve environmental objectives, it also leaves significant opportunities to a Contracting Party to implement environmental protection measures within its territory. Moreover, both the Tokyo and Uruguay Rounds of multilateral trade negotiations have shown an increasing GATT sensitivity to environmental issues.

The GATT law comprises several fundamental principles calculated to guarantee an open, equitable, secure, non-discriminatory and predictable trading system. The most central of these is the principle of non-discrimination. The GATT Secretariat states:

"The rules of the General Agreement are concerned primarily with preventing discrimination, that is, limiting the extent to which countries can discriminate between home products and imports, between imports from different countries, and between goods sold in the home market and those exported."

The former, dubbed the "most-favored nation" clause, demands that where any trade advantage is conferred by a Contracting Party on another with regard to customs charges, duties and formalities, it shall be immediately and unconditionally extended to all other Contracting Parties. The latter, known as the "national treatment" clause, provides that internal taxes, laws and regulations should be applied to imported and domestic products in such manner as not to afford protection only through customs tariffs and not through quantitative restrictions or other measures (Articles XI-XV) and that tariffs should be reduced through multilateral negotiations (Article II). In addition, however, the GATT, in its Article XX, establishes important exceptions to these rules and principles. Those exceptions create substantial possibilities for environmental protection.

A. The facilitative Aspects of GATT Law:

1. National Environmental Protection Measures:

Generally speaking, existing GATT rules impose no constraints on the ability of a Contracting Party to protect its own national environment. It is at liberty to implement and enforce environmental policies and laws designed to either regulate domestic production processes or prevent adverse environmental impact arising from the consumption of domestic and imported products. As long as national environmental policies and laws are implemented in a non-discriminatory manner in relation to foreign products, they will generally be consistent with GATT rules. Certainly, international concern over technical and other regulatory barriers to trade have, as we shall see, resulted in a number of multilateral disciplines but these often contain significant exceptions relating to environmental protection.

¹¹ Shyrbman, *op.cit.*, P. 30.

The range of measures a Contracting Party can institute to protect its environment without infringing the GATT may conceivably include taxes on polluting products, tax rebates on environmentally friendly products and technologies, and the regulation of domestic production and a consumption even to the extent of prohibiting the production and sale of specific products. In this latter respect, the ban on domestic sale can also be enforced at the point of importation or exportation so long as it applies regardless of the origin or destination of the product.

In effect, a Contracting Party can regulate its production processes in any way it deems fit. It can also treat its imports and exports the same way it deals with its own products. What the GATT objects to is an attempt by a country to impose its own environmental policies on the production processes of other countries or to discriminate in its regulatory measures against imports or sources of imports.

2. The Article XX Exceptions:

The GATT contains certain exceptions to its rules. The significance of these exceptions to environmental protection is just beginning to be realized. Environmental protection measures that would otherwise violate GATT obligations may be permitted under Article XX of the GATT. In essence, these are trade restrictive measures taken by a Contracting Party to adopt and enforce measures necessary for the protection of human, animal or plant life or (paragraph b) or relating to the conservation of exhaustible natural resources (paragraph g). Although Article XX (b) is largely focused on the use of sanitary and phytosanitary measures to safeguard the life and health of humans, animals or plants within the jurisdiction of the Contracting Party, it may not necessarily be limited to saving quarantine and other sanitary regulations. The wording of the provision is wide enough to encompass, *inter alia*, restrictions on the importation of hazardous products and waste and the introduction of exotic species which could endanger indigenous genetic resources. On the other hand, Article XX (g) may facilitate the conservation of natural resources through restrictions on exports, for example, of animal and plant species or of their specimens and trophies.

The latitude conferred by Article XX is, however, circumscribed in three important ways. As the GATT panel in the Mexico/US Tuna Dispute noted:

"Article XX is a limited and conditional exception from obligations under other provisions of the GATT, and not a positive rule establishing obligations itself; therefore, it is the practice of panels to interpret Article XX narrowly, to place the burden on the party invoking the article to justify its invocation...."¹²

First, Article XX states that the measures taken should not be applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail. Secondly, the measures should not constitute a disguised restriction on trade. Lastly, with respect to the conservation of exhaustible natural resources, the measures taken must be made effective in conjunction with restrictions on domestic production and consumption. In effect, the trade measures taken for environmental protection must be necessary to achieve defined objectives and those objectives must not be used as a pretext for reducing competition from exports.

¹² See GATT, United States - Restrictions on Imports of Tuna, Report of the Panel DS21/R, 3 Sept 1991, Para. 5.22.

Whereas Article XX was designed to ensure that commitments under the GATT did not impede the pursuit of public policy measures relating to health and conservation, the danger of protectionist exploitation of that latitude has dictated a cautious approach by GATT panels to claims made under the provision. However, the increased invocation of the Article in the name of environmental protection may be more of a reflection of fundamental choices being made by Governments in favour of the environment rather than evidence of a resurgence of protectionist fervor.

B. The GATT "Constraints" to Environmental Protection:

The GATT imposes certain limits to the use of trade policies to secure environmental objectives. In this regard, the GATT constitutes an important impediment to the ability of Contracting Parties not only to protect their own national environments but also to influence the environmental policies and practices of other countries. The pertinent GATT rules concern the unilateral use of trade measures to influence change in the environmental policies of other countries; the adoption of technical regulations and standards; and the grant of environmental subsidies to domestic producers. The rules governing technical barriers to trade and subsidies, however, expressly contemplate strictly defined exceptions for the purposes of environmental protection.

1. Influencing Other Countries' Environmental Policies:

The production and consumption activities in one country may be a source of genuine environmental concern to other countries. Those processes may result in transborder environmental interferences, adversely affect the conservation status of animal and plant species, or impact on the global commons. An environmentally-sensitive Contracting Party may therefore seek to instigate changes in the policies of the offending party by taking unilateral trade measures such as the imposition of import restrictions on its products. Such a measure, in making market access dependent on the domestic policies and practices of the exporting country, would largely violate the GATT principle of non-discrimination. That principle has a laudable basis:

"The requirement not to discriminate between different sources of imports ... is intended not only to prevent trade distortions. It exists also to protect each member of GATT from unilateral imposition of domestic standards or policies by importing countries through the threat of market access restrictions. It protects trade relations from degenerating into anarchy through unilateral actions in pursuit of unilaterally-defined objectives, however valid they may appear."¹³

Unilateral trade measures are likely to elicit counter-measures thereby generating insecurity and unpredictability in the international trading system. Moreover, such actions are particularly objectionable because they represent an attempt by some countries to impose on others their own conception of what is environmentally acceptable. The most recent of such cases concerned the United States restrictions on imports of tuna and tuna products from Mexico and "intermediary nations" under the Marine Mammals Protection Act, 1972. According to the Act, any country exporting tuna to the United States must prove to the relevant U.S. authorities that its tuna fleets meet the dolphin protection standards set out in the law, otherwise the U.S. Government must embargo all imports of yellowfin tuna and tuna products from that country and from "intermediary nations." Mexico's regulations affecting the production of tuna did not satisfy the U.S. regulations since they resulted in the incidental killing of dolphins. The U.S. argued that the import restrictions were justified under the Article XX exceptions clauses. The GATT panel handling the dispute found that "Article XX does not permit a Contracting Party to take trade measures for the purpose of attempting to enforce its own domestic laws regarding animal health or an exhaustible natural

¹³ GATT, Environment & Trade, GATT, Geneva, 1922, P. 10.

resource outside its jurisdiction".¹⁴ A contrary interpretation would mean that each Contracting Party could unilaterally determine the health and conservation policies from which other Parties could deviate only at the risk of losing their trading rights. The negative implications for the stability and equity of the multilateral trading system are hardly negligible.

2. Technical Barriers to Trade

The Agreement on Technical Barriers to Trade (TBT) negotiated during the Tokyo Round of trade negotiations contained important obligations concerning the adoption and application of technical regulations and standards by member countries.¹⁵ The definition of "Technical regulations" and "standards" was restricted to "technical specifications" which lay down product characteristics. The basic obligation imposed by the Agreement was that such regulations and standards should not, either in their nature or in their application, constitute unnecessary obstacles to trade. It further exhorted, member countries to use international standards where these were available. The objective was to progressively harmonize national regulations and standards so as to minimize distortions to international trade.

Although the TBT Agreement from the Tokyo Round circumscribed the liberty of a Contracting Party to adopt and apply technical regulations and standards, it expressly allowed derogations for purposes of, *inter alia*, environmental protection. Such derogation was, however, made subject to both substantive and procedural requirements: the regulations must be based on scientific criteria and there must be prior notification of Contracting Parties before their imposition.

The protection of the environment has become, since the middle 1980s, an important theme cited by Contracting parties as a rationale for adopting and applying technical regulations and standards.¹⁶ Indeed, between 1980 and 1990, a total of 211 notifications made to the GATT Secretariat explicitly stated the objective of the regulations and standards as environmental protection.

The modifications imported into the Tokyo TBT Agreement during the Uruguay Round of trade negotiations has not only increased the relevance of the Agreement for environmental protection but also widened the latitude left to Contracting Parties for pursuing that objective. Under the new TBT Agreement, concluded in December 1991, the definition of technical regulations and standards has been widened to cover processes and production methods.¹⁷ It is no longer restricted to technical specifications concerning product characteristics. Since environmental protection in many cases is provided by adopting technical regulations or standards which define processes and production methods, this modification enhances the facilitative aspects of the Agreement. In addition, however, the Uruguay Round has been even more explicit on the adoption and application of technical regulations and standards for environmental protection. Both the TBT Agreement and the Draft Sanitary and Phytosanitary Measures (SPS) Decision consecrate the general principle that technical regulation and standards and sanitary and phytosanitary measures shall neither constitute "a means of arbitrary or unjustifiable discrimination between

¹⁴ Supra, Note 6, Para. 5.32.

¹⁵ See GATT, The Tokyo Round of Multilateral Trade Negotiations, GATT, Geneva, 1980; GATT, Basic Instruments and Selected Documents, 26th Supplement, GATT, Geneva, 1980, P.8.

¹⁶ GATT, Trade and Environment: Factual Note by the Secretariat, GATT, Geneva, 1991, P.85.

¹⁷ Ibid., P. 13.

countries where the same conditions prevail" nor "a disguised restriction on international trade."¹⁸ But both instruments in their preambles accept, as a basic principle, that Contracting Parties should not be prevented from taking necessary measures to protect human, animal or plant life or health. The preamble of the TBT Agreement in addition expressly mentions environmental protection as a legitimate objective for applying technical regulations and standards.

3. Environmental Subsidies:

The quest for a "level playing field" in international trade often leads to demands by domestic producers for subsidies to cover the extra cost of meeting strict environmental standards at home. The aim is to offset the "unfair cost advantage" that accrues to foreign producers operating under less stringent environmental requirements. The grant of subsidies by governments to domestic enterprises is, however, strictly regulated and closely monitored under the GATT. Indeed, subsidies are, in general, considered trade distorting and unnecessary barriers to international trade. To this extent, it may be argued that the GATT imposes a constraint on the ability of a Contracting Party to adopt and implement policies essential for the protection of its environment. But, as with the TBT rules, a closer examination of the subsidies rules reveals a clear attempt to find an appropriate balance between the desire to avoid distortions to trade and the need to respect sovereign authority over environmental policies.

The objective of both Article XVI of the GATT and the Subsidies Agreement¹⁹ concluded during the Tokyo Round is to ensure that the use of subsidies by a Contracting Party does not adversely affect the interests of other Parties and to afford relief where injury results from their use.

The Subsidies Agreement, however, recognizes that subsidies are used by Governments to achieve important social and economic objectives. Article II of the Agreement therefore allows the grant of subsidies in a limited range of situations. These include the use of subsidies for the "redeployment of industry in order to avoid congestion and environmental problems." Environmental protection is, in effect, conceived of as a legitimate objective which can be pursued through measures which would otherwise be GATT-illegal. Under the Draft Agreement on Subsidies and Countervailing Measures currently under negotiation at the Uruguay Round, "non-actionable" environmental subsidies are expressly defined to cover assistance to facilitate, on the one hand, adaptation of existing facilities to the demands of new laws and regulations and, on the other, the adoption of environmentally benign technologies and production processes".²⁰

III. Trade Measures in Multilateral Environmental Agreements:

Contemporary developments in international treaty-making in the field of environmental protection indicate an increasing reliance on trade provisions. This is due to the recognition by governments and environmental interest groups that trade measures can either act as incentives to participation in international environmental agreements or circumvent the activities of non-Parties from undermining the effective implementation of legal instruments. This trend is raising concern in international fora because of the possibility of conflict between such measures and the obligations of Contracting Parties under the

¹⁸ See the preambles to the Agreement on Technical Barriers to Trade and the Decision by Contracting Parties, Agreement on the Application of Sanitary and Phytosanitary Measures.

¹⁹ Agreement on Interpretation and Application of Articles VI, XVI, and XXIII of the GATT, (The Subsidies Agreement) in GATT, Basic Instruments and Selected Documents 26th Supplement, GATT, Geneva, 1980, P.56.

²⁰ Supra, Note 10, pp. 16-17.

GATT.

Of the more than 150 multilateral agreements in the area of the environment, 18 have trade provisions. The trade measures contained in those provisions can be categorized into three basic typologies: the first concerns the regulation of exports and imports *per se*; the second, the regulations of exports and imports in conjunction with the control of domestic production and/or consumption; and the third, the restriction of trade with non-parties to the particular environmental agreement.

The consistency, or otherwise, of these provisions with the GATT, remains unsettled. Neither the international adjudicatory machinery nor the GATT Panels have had an occasion to pronounce themselves on the issue. Determining the compatibility of these provisions with the GATT could, to some extent, depend on whether one adopts a strict or broad interpretation of the GATT.

A. A Strict Interpretation of the GATT:

The first typology, which is best illustrated by CITES, is incompatible with the existing rules and principles of the GATT. CITES builds on a long history of controlling trade in endangered species through the issuance of export permits. The difference between CITES and preceding international legal instruments dealing with the conservation of fauna and flora lies in the fact that whereas in the latter trade measures were prescribed to complement the domestic observation measures contained in those instruments, CITES sought to regulate trade *per se*. CITES' scheme is predicated on the administration of export and import authorizations. Trade is restricted in two ways:²¹ first, export and import permits are to be granted only where the appropriate national authorities confirm that the export/import will not be detrimental to the survival of the species; and secondly, where the country of destination or origin has not issued an import or export authorization, no export or import is permitted. From a strict legal point, herein lies the possibility of conflict with the fundamental GATT principles of non-discrimination and national treatment. The GATT only permits departures from these cardinal principles where either the restrictions on imports are accompanied by restrictions on domestic production and consumption, or the trade measures relate to the conservation of exhaustible natural resources and are primarily aimed at rendering effective restrictions on domestic production and/or consumption. To the extent that CITES seeks simply to regulate and impose restrictions on trade, without explicit concomitant obligations concerning production and/or consumption at the domestic level, to that extent, it may be inconsistent with the GATT.

The second typology, manifested in the Vienna Convention on the Protection of the Ozone Layer, 1985; its Montreal Protocol on Substances that Deplete the Ozone Layer, 1987; and the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, is basically compatible with the GATT. The primary obligation of the Vienna Convention and the Montreal Protocol is the elimination of the production and consumption of controlled substances by the year 2000. In addition, the Montreal Protocol implicitly obliges the Parties to gradually reduce and eliminate imports and exports of controlled substances.²² Whereas the central objective of the Basel Convention is to limit and regulate the transboundary movements of hazardous wastes

²¹ Article III and IV.

²² Article 1 and 2.

and to establish notice and consent procedures, the parties also undertake to reduce the domestic generation of hazardous waste.²³ Trade measures may include prohibition of imports; authorization of exports only where consent has been granted by the country of destination; and prevention of exports or imports "where there is reason to believe that the waste will not be disposed of in an environmentally-sound manner".²⁴

In both instances, the instruments require the implementation of national and international measures. The international measures (trade restrictions) may be conceived of as complementing actions taken within national jurisdictions to control or eliminate the production or consumption of environmentally harmful products. Since domestic production or consumption is being controlled, imports and exports may be controlled in conjunction with, and in support of, domestic restrictions. The trade measures concerning restrictions on imports and exports under the Montreal Protocol and the Basel Convention can thus be justified both under the latitude conferred on Contracting Parties to subject imports and exports to the same regulatory strictures that apply to domestic products and the exception under Article XXb which saves measures "necessary to protect human, animal or plant life and health."

The third typology, represented by certain provisions of the Montreal Protocol and the Basel Convention which stipulate a difference in trade measures affecting Parties and non-Parties, is contrary to the fundamental GATT principle of non-discrimination. Under the Montreal Protocol, Parties are required to ban imports from and exports to non-Parties within a specific time-frame and to discourage the export to non-parties of technology for producing and utilizing controlled substances.²⁵ The Basel Convention not only bans trade in hazardous wastes or other wastes with non-Parties but also demands that Parties refuse to export such wastes to countries which cannot manage them in an environmentally sound manner.²⁶

On a strict interpretation of the text of the relevant provisions, these measures are inconsistent with the GATT framework. There is no scope under the GATT for discrimination as regards the sources and destination of products. Indeed, Article I outlaws discrimination against exports to and imports from the territories of other Contracting Parties. In line with this interpretation, it is doubtful whether the ban on trade with non-Parties can be justified under the Article XX exception clauses. This is because under the two instruments trade between Parties is not prohibited.

B. A Broader Interpretation of the GATT:

Scientific developments and the new global agenda of sustainable development have created a new context which should be taken into consideration. There may be room for a more flexible interpretation of the GATT in the light of the changed context. Indeed, Agenda 21 has called on governments to encourage the relevant international organizations to "clarify the relationship between GATT provisions and some of the

²³ Article 4(2)

²⁴ Article 4.

²⁵ Article 4(5).

²⁶ Article 4.

multilateral measures adopted in the environment area."²⁷ In this respect, two points can be made:

1. Some characteristics of the trade provisions in international agreements underline the need to take a more liberal view of their relationship with the existing framework of international trade. First, the trade provisions are adopted solely for the purpose of securing compliance with the terms of the agreements with a view to enhancing environmental protection. They are essential to the effective implementation of the instruments, since other compliance incentives which are less trade restrictive are not readily available. They are quite specific and are not general prohibitions designed to undermine the free trade regime. This is fully in consonance with Agenda 21 which demands that trade and environmental policies should be mutually supportive.

Secondly, the trade provisions emerge from an open and inclusive process of international negotiation. They are therefore products of a broad and representative international consensus over the pertinent issues. To this effect, they can neither be characterized as arbitrary nor as lacking in justification. Thus, they are in conformity with the requirements of Article XX of the GATT.

2. International treaty law provides that a treaty shall be interpreted, *inter alia*, in the light of its object and purpose. The object and purpose of the GATT, as stated in its preamble, is to promote international trade "with a view to raising standards of living" and "developing the full use of the resources of the world and expanding the production and exchange of goods." These objectives cannot be realized on the basis of a diminishing environmental resource base. In the new context of sustainable development, "full use" ought to be construed to mean sustainable use. Agenda 21 thus demands that the international trading system should be consistent with the goals of sustainable development.²⁸ Given the changed context and the object and purpose of the GATT, trade provisions in multilateral environmental agreements should be considered compatible with the GATT framework. The goal in both instances is to improve the quality of human life and to promote sustainable development.

In any case, the spirit of Article XX of the GATT is to constitute environmental protection, a public policy imperative warranting departures from established GATT principles. It is not inconceivable that, if the scientific knowledge we possess today was available at the time of the formulation of Article XX, its environmental exceptions would have been expanded. Consequently, Article XX deserves a broader interpretation in order to save trade measures incorporated in international agreements with the sole objective of making those agreements effective.

²⁷ Chapter 2, Para. 2.22.

²⁸ The Vienna Convention on the Law of Treaties, 1969, Article 31(1); G. Gitzmaurice, "The Law and Procedure of The International Court of Justice: Treaty Interpretation and Certain Other Treaty Points", (1951) 28 BYBIL 1.

B.1. THE PROMOTION OF CLEANER TECHNOLOGY

Presented by:
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In the introduction, definitions were given on the what is meant by cleaner technology. Emphasis has been put upon the application of an integrated technology that reduces the risks to humans and environment. In the systematic approach to the subject, the following points were dealt with: policy planning and strategies, legislation, execution, implementation and enforcement.

The respective subjects were dealt with and the following highlighted: awareness campaigns (public, institutes and industry), incentives (subsidies, taxes and awards), the development of the institutional and organizational capacities and certification systems. The influence of the press has been given attention as a means to reach out to the public at large, to report successes and initiate political action. In the same context, networking with other international organizations is shown to be an essential part of the promotional activities.

It is shown that the introduction of a legal framework focussed to cleaner production is beyond reach in the very beginning. One has to look for the elements in other laws and regulations like E.I.A., or care certification systems (green labels or ecolabelling) that direct to a cleaner technology or a better taking for the environment. Once a cleaner technology has been demonstrated, more possibilities will become within reach to implement and enforce the technology (permitting, enforcement through the issue of general directives or regulations that are part of most of the framework laws).

The human resources and absorption capacity of the receiving side has been examined. It is necessary to find the relevant parties to disseminate and promote the knowledge. It was emphasized that the needs of the recipient were as important as the availability of the technology. It was concluded that in practice, the proper cleaner technology has one or more of the following items covered: conservation of raw materials and energy; eliminating toxic raw materials; reduction of the toxicity of emissions and wastes before they leave the process.

The conclusion to technology in general was that, only a cradle to grave approach of the product/technology cycle should be considered.

Finally, a step-by-step approach of the introduction of a cleaner production programme in practice was introduced.

The establishment of industrial inspectorates

It was shown in the introduction to the subject that inspection is a prerequisite to a proper execution and implementation of laws. The regulatory chain was explained in detail.

Compliance and enforcement are executed by inspectors. Various inspector systems were shown. The common factors of these systems were analyzed. It was concluded that inspectors should, in general, not belong to the same organizational section as the one that has issued the permit. The independent and strict control of permits is essential to the proper execution of the laws and regulations in force. It further stressed the importance of reporting the results of the enforcement activities to the policy-makers. The results of inspections made available to the public is another factor in the route to a grown-up and independent inspectorate.

It became obvious that a pragmatic approach to enforcement will deliver proper answers to the state of affairs in the execution of country's laws. *Ad hoc* enforcement should only be employed in rare cases. It was stressed that only enforceable conditions or prescriptions can be enforced.

Examples of the human resources required for an inspectorate were explained and a step-by-step initiation of an inspectorate organization was given, covering policy-making strategy planning a.s.o. to finally a fully-grown organization.

Inspectorates should work in close cooperation with the police and public prosecutors in order to achieve maximum effectiveness.

**B.1. PRESENTATION OUTLINE:
COMPLIANCE AND ENFORCEMENT OF
ENVIRONMENTAL LAWS AND REGULATIONS**

Cleaner Production & Toxic Wastes Minimization

Presented by:
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B.1.1 Introduction

B.1.2. State of the environment

B.1.3. Environmental policy

- * Policy instruments nowadays in use are:
- * Execution
- * Regulatory chain

B.1.4. Licensing and permitting

B.1.5. Compliance and enforcement

- * Starting point
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B.1.6. Compliance and enforcement in practice (Dutch example)

- * Condoning
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B.1.7. Infrastructure and human resources for compliance and enforcement

- * Institutional requirements
- * Human resources

B.1.8. Centralization versus decentralization

B.1.9. Alternatives to rules and regulations

B.1.10. Cleaner production and toxic wastes minimization (promotion and regulations)

**B..3. BIBLIOGRAPHY OF SELECTED TRAINING MATERIAL:
CLEANER PRODUCTION AND TOXIC WASTES MINIMIZATION**

- C.3.1. UNEP IE/PAC, "From Regulations to Industry Compliance: Building Institutional Capabilities," Technical Report No 11, 1990.
- C.3.2. UNCED, "Integrating Environment and Development in Decision-Making," Chapter 8.

**PRESENTATION OUTLINE:
COMPLIANCE AND ENFORCEMENT OF ENVIRONMENTAL LAWS AND REGULATIONS
(CLEANER PRODUCTION & TOXIC WASTES MINIMIZATION)**

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1 December 1993

- I. INTRODUCTION
- II. STATE OF THE ENVIRONMENT
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 - * Policy instruments nowadays in use are:
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- IX. ALTERNATIVES TO RULES AND REGULATIONS
- X. CLEANER PRODUCTION AND TOXIC WASTES MINIMIZATION
(promotion and regulations)

²⁹ This paper has been prepared by Mr Rob Glaser, resource person. The views expressed in it are those of the author. This paper has been issued without formal editing.

COMPLIANCE AND ENFORCEMENT OF ENVIRONMENTAL LAWS AND REGULATIONS (CLEANER PRODUCTION & TOXIC WASTES MINIMIZATION)

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DEFINITIONS:

COMPLIANCE

The achievement and maintenance of environmental requirements by particular facilities in the various target groups (industry, agriculture, local authorities).

ENFORCEMENT

The application of a set of legal tools designed to ensure that a defined set of requirements is complied with.

INSPECTION

The process by which inspectors determine that a facility is in or out of compliance, including examination of records, quality of discharges and other conditions.

I. INTRODUCTION

In the developing countries, large scale industrialization is taking place and economic activities, such as petrochemical complexes, "high tech" industry, transport and shipping are flourishing. Areas in India, Singapore, Thailand, Malaysia and Indonesia are developing special estates for big petrochemical plants in a relatively short period of time. The dark side of such developments is now looming: water pollution, waste problems, air pollution, noise and stench, to mention a few.

In the countries, one has to come to terms with the negative side of the newly acquired wealth and economic prosperity. A national public awareness is slowly developing, although one realizes that employment and economic factors still dominate the decision-making forces.

As a result, government policies are taking shape and the establishment and strengthening of governmental agencies are clearly emerging.

II. STATE OF ENVIRONMENT

The state of the environment of a number of developing countries today is alarming. It shows the numerous problem areas in the field of the environment that has developed within a very short period of time. In spite of great efforts undertaken on many environmental issues in the regions, quality improvement in the various fields, however, are difficult to measure. The speed of development is overtaking the improvements, which means that unless drastic action is taken on an overall base in a structural integral manner, the environment will deteriorate further.

Even countries that do not develop at the speed of those mentioned above, are likely to suffer because, as has been reported, sizeable amounts of waste originating from those areas of accelerated developments, are dumped uncontrolled in these countries.

The pressure to achieve sustainable development in all areas must be increased and the action must show extreme and rigidly applied environmental measures to achieve the goal.

The environmental agencies in charge to guide this change have to realize that, for example, in connection with the industrial development:

- a complete and drastic change in production and consumption patterns initiating different technologies for processes and products must be introduced. In many areas it will mean an end to the end-of-pipe treatment of the prevailing industrial philosophy;
- a rigorously applied integral approach to environmental issues leading to a real and lasting improvement must be introduced in all activities.

III. ENVIRONMENTAL POLICY

In general, before reaching the full public and political awareness of the serious environmental situation, a period of mainly policy-writing, defining of goals and *ad hoc* coping with the most urgent issues (one by one) is observed. After this period in which inventory studies, guidelines, regulations and general environmental framework laws have been developed mostly in sectoral parts, the need to develop more integral laws emerges.

As a result, environmental politicians now aim at:

- Efforts to achieve more integrated policy development and assessment of the effectiveness of measures both singly and in combination of their likely impact on the environment as a whole;
- Emphasis on shared responsibility for the environment and efforts to achieve cooperation in tackling environmental problems, not only between government bodies and industry, but also between members of the public or public bodies that are either involved or interested;
- Efforts to employ effective combinations of instruments. It will rarely be possible to achieve a goal using a single instrument. Individual instruments will generally have to support or reinforce each others' effects;
- Increasing attention to implementation and enforcement when choosing combinations of instruments and/or development/reviewing regulations.

Environmental policy plans, visualizing the above intentions, could help bridge the gap between policy decisions and regulations.

There will be more attention to regulations as the basis for deploying instruments. Extra attention will be given to the form which regulations must show. Environmental legislation has traditionally been in the form of framework legislation. The authorities have been given wide-ranging powers while the law has done little more than regulate the use of these powers. This might be in conflict with the general principle that the Parliament lays down in the form of detailed regulations, the main points of the policy it has in mind.

In a number of countries, through the excellent approach of Environmental Impact Assessment (EIA) reports, not only on major industrial developments but also on infrastructural activities, a start is made towards a more integral approach. The route of the EIA's should be pursued relentlessly and has proven to be very effective in the development of public awareness.

This approach promotes the awareness of individuals and organizations (in both the public and private sector) who may, in some way or another, impose a burden on the environment, and make them realize the possible consequences of their actions. Public information programmes, education and intensive consultation with target groups are a way of giving shape to this joint responsibility. Individual responsibility can also be emphasized by some forms of regulations.

*** Policy instruments nowadays in use are:**

- transfer of information, based mainly on public information programmes, education and setting good examples;
- agreements entered into voluntarily, such as agreements by public law, administrative agreements and voluntary agreements (covenants);
- financial incentives, including subsidies and regulatory levies;
- direct regulation: directly enforceable conditions in respect of certain environmentally unsafe activities by the public and by industry;
- other forms of regulation such as specific audit obligation, the regulation of risk liability, the obligation to provide information, conduct investigations, render accounts and compile reports.

*** Execution**

In view of the heavy load on human resources, especially in the very start of the regulatory chain, the execution and the licensing will be in central governmental hands. Once the infrastructure has been properly organized, lower authorities might be put in charge with more detailed implementation, execution and enforcement. The governments might be assisted in the research and analytical work by certified laboratories.

In countries with adequate and qualified human resources, the governmental authority is shifted from the central government to the lower authorities (provinces, regions, municipalities). In other countries, central government will still issue permits and implement the laws and regulations they have developed. This is in particular the case in countries where limited numbers of qualified people are available. The overall trend is that, permits from the central governments are issued specifically on activities that carry a political and environmental weight, exceeding the capabilities of the lower authorities (nuclear installations, hazardous waste, power plants).

It became clear that, as a result of the many challenges posed to governments, the number of regulations and laws put into the pipeline of political and parliamentary discussion increased dramatically. It became obvious that in many cases, the new and sometimes vigorous regulations need strong and strict compliance and enforcement. A systematic approach to enforcement is quite rare in many countries. As it is done in many other countries in the world, officials and authorities only react on complaints or only on very serious complaints. In those cases, when very clear damage to the environment is noticed, visible to the surroundings and of political interest, enforcement is applied. One has to realize that enforcement of regulations is an integral part of the regulatory cycle and cannot be overlooked in the full implementation of rules and regulations.

* Regulatory chain

To understand the regulatory cycle, one could visualize five sections of a wheel: legislation, the setting of standards, permitting/licensing, implementation and finally, a section of enforcement in the broadest sense. The driving force of the wheel is policy-planning for which, in turn, a strategy has been developed. As is the case in any chain, the weakest link determines the strength of the chain and, as history has proven in the Netherlands as well as many other countries, enforcement appears to be the weakest link. Enforcement is the last link as well, while on the other hand, the enforcement sector in the wheel should also function as the first for the next round of activities improving the strength of the chain. This would mean that enforcement in practice will induce experience in the legislation/standards, permitting/licensing, implementation and enforcement, a process of continuous improvement and debugging the measures taken to improve the environment. One must realize that, in the process of the implementation of rules and regulations, successful acceptance of these rules lies in the fact that they must not be ambiguous or unrealistic.

No enforcement system can be developed when widespread unacceptability of the rule is observed. This holds, of course, for *non-dictatorial* governmental systems. On the other hand, one must realize that, when no enforcement exists, it will seriously affect the government's credibility in achieving their goals.

Enforcement is an essential part of environmental policy, but effective enforcement can only be possible if the other links in the chain are sufficiently strong. This means that the enforceability of statutory regulations and permit conditions must be guaranteed. Generally speaking, it is up to the former to take the lead in the enforcement of environmental legislation. It is ascertained that if the regulations contained in this legislation are not being observed, it is up to the authorities to take action to rectify the situation. If these steps are ignored, or in case such action is considered necessary because of the nature of the offence or the offender, the police and the Public Prosecutions Department should institute proceedings under criminal law.

The role of enforcement under criminal law will depend on the nature of the environmental offence. Behaviour which constitutes a deliberate violation of regulations which protect elementary environmental interests, thereby causing a great deal of concern, should be dealt with in the same way as other offenses. In such cases, the offenders should always be dealt with under the criminal law, and the investigation prosecution and punishment of such offenses should accordingly be given high priority. Administrative enforcement will generally be more appropriate in the case of less serious offenses, and will include both preventive measures and investigative action. In such cases, enforcement under criminal law should be regarded as a last resort after action by the authorities, and as a way of filling any loopholes in administrative enforcement.

IV. LICENSING AND PERMITTING

Once the regulators/standards are formulated and put into operation, in many cases, a permitting system comes into force.

The main elements of permitting and licensing procedures are mentioned in the Annex Report, Chapter 4, drafted by UNEP IE/PAC in Paris, for which the author has provided the ingredients. In the context of the subject of compliance and enforcement, it must be stressed that the more accurate and thorough these procedures are executed, the better the compliance and enforcement part can be executed at a later stage.

The trend nowadays is to provide to the license, as part of the permit, a checklist on compliance that eventually will take place. Considerable time will be saved for the inspectors in charge with future compliance that eventually will take place. Considerable time will be saved for the inspectors in charge with future compliance testing. This checklist, provided it has been developed in a very thorough way, would also help the company to keep track of his obligations towards the permitting authority. It also provides the company elements to organize an audit system for its management. Management information systems, comprising auditing of the environmental issues, are becoming a standard practice in industry.

The trend towards "care-systems" is another step in the process of the creation of environmental awareness of industry.

V. COMPLIANCE AND ENFORCEMENT

As shown in chapter III, licensing has to be followed by compliance and enforcement. In many countries, the compliance and enforcement is executed by the same authority that issued the permit (1st line supervision). In other countries like the Netherlands, a very decentralized government system exists where the permitting authorities have the 1st line supervision, and inspectorate exists that supervises the performance of the first line execution (2nd line). It is a central governmental organization with special authority and functioning independently from the permitting side.

*** Starting point**

Actions are generally triggered by a very clear-cut offense to which the authorities cannot close their eyes for fear of losing credibility. Many cases are, however, initiated by citizens and/or environmental organizations rather than from the elected authorities. The task of the authorities, for example, by means of the inspectors, is then to initiate and promote better compliance and enforcement.

The political interest in environment is, at this point in time still very scarce; the public prosecutors are quite ignorant and uninterested in the prosecution of offenses in the environmental field.

Points that have contributed to this attitude are:

- lack of knowledge of the laws and regulations;
- lack of knowledge within the police force;
- low political commitment;
- no experience and availability of successful lawsuits;
- no set of rules to judge the importance of the felony;
- no trained specialists in the analysis of environmental crimes.

The above picture shows the state of affairs of the public office in charge with the criminal prosecution in many countries in the world in the field of environmental offenses. The administrative offices issuing permits and in charge of the first-line supervision, differed very little in attitude with the public offices. The process of the enforcement through the administrative laws has been slow, and the administrators were always hampered by the lack of knowledge as their colleagues in public offices. The procedures through civil laws were not operational.

* Follow-up

Once public opinion and political interest is raised, regulators will initiate the process of laws and regulations that have to be promulgated, implemented and enforced, or revive the implementation of existing laws.

A network of organizations for laboratories and human resources has to be put into operation. An information centre will have to be made available. A coordinated and integral approach to enforcement has to be developed.

Depending on the governmental structure of a country, enforcement is a combined activity of the various competent authorities. Many of the laws are being put into the framework of criminal laws and imprisonment being the ultimate penalty. Administrative/civil laws are also in use for minor violations and could serve in a simple way as an effective approach to compliance and enforcement.

If preventive measures, detection, as well as investigations are to be effective, an integral approach is a must. This calls for regular consultations aimed at coordination between the different bodies involved in enforcement at different levels.

The trend is that cohesion between administrative enforcement and enforcement by the criminal justice authorities continues to grow in importance. The use of civil laws in addition to the other possibilities of enforcement is on the increase.

VI. COMPLIANCE AND ENFORCEMENT IN PRACTICE (Dutch example)

In dealing with the question of how we enforce in the Netherlands, we can distinguish three approaches. They are all executed in a systematic way and once started, should be finished. *Ad hoc* and inconsistent handling of enforcement activities will destroy any and all enforcement policies quickly.

The first group is the average-, small-, and medium-sized company not involved in many environmental issues. These companies do not generally have much experience and knowledge in handling the complicated structures required by permits/licensing procedures/rules and regulations.

The second group is the larger company that has staff dedicated to work with authorities. These companies know the rules and regulations and are, in general, assigned to the authorities with whom they deal. They do not have experience in dealing with enforcement programmes but usually are co-operative.

The third group, the most difficult, applies to medium- and large-sized operations dealing in waste and therefore economically dependent on the profits in the field of waste handling and disposal. The knowledge of the laws and regulations in general is good. The strict implementation of the permits and the enforceability is very difficult. The smaller and medium-sized companies in the field of waste handling battling to survive economically are tempted to evade legal procedures.

The first group is tackled along a three-step approach. The administrative compliance check: this documentation check provides the basic information of the compliance testing for the authorities and the special officers in charge with investigation. The on-site visit following the administrative check will result in a reporting to directly involved authorities, as well as to the company visited, outlining the observed non-compliance to the permit. Sometimes this report is supplied with complementary information because the firm is not capable of acquiring essential information itself. A next visit is announced and a time-table to correct non-compliance is included. A warning is given that in case non-compliance is again noticed, administrative and or criminal prosecution is to be anticipated. This rather relaxed approach is important.

The experience is that the majority of the companies involved correct the situation speedily.

The follow-up and check-up control have to be performed as a second step. The third step is the final enforcement step which the company cannot avoid. The systematic approach to the potential offender will exclude mitigating circumstances in a later stage and will clearly show reproachful behaviour if non-compliance requires strict enforcement. Once the "reproachability" has been carefully established, then the public prosecutor has a case that can be successfully brought to court.

The experience gained applying this approach to the first group is excellent. It is time-consuming but after some experience, the first and second step in this system can be applied in a routine manner, selecting categories of firms with standard check-lists.

The second group is approached in a similar way, although less time is spent upgrading information for the company. The first phase is what is called the "facts and figures tests." The second phase is rapidly introduced because the knowledge has been available at the company of non-compliance to certain aspects. The visit and reporting is handled in the same way as in group one. Results are as encouraging as with group one. The strain it puts on the specialized officers is quite great. An in-depth knowledge of the facility is required. The proof of non-compliance is more complicated. The number of cases brought to court is therefore not impressive.

The third group needs a lot of attention. The Hazardous Waste Act is the responsibility of the Ministry of the Environment.

The three-step approach is now effectively shortened. The Ministry, being responsible for the permit, should now directly apply the second phase.

During administrative checks, the inspector closely examines the organization, the waste acceptance policy and the processing of the hazardous waste of the company involved over a certain period. In addition, ample time is given to other Acts and concern the company as well, such as the Nuisance Act and the Clean Water Act. In the reporting, waste handling companies movement and transport of waste material is very important, also bookkeeping, administrative control and financial checks (accountancy control). In many cases, it leads to outside offenders. Sampling checks are made. During an in-depth inspection, the financial and goods administration are also checked. Violations are ascertained and reports to the public prosecutor are filed. In rare cases, a warning is given.

The three groups of enforcement approaches operate according to preset programmes, and although each case might be different, the systematic approach is the same. In more complicated cases, a special task force is appointed to the public prosecutor for criminal cases of great complexity. It is composed of special investigating officers from the Environmental Inspectorate who investigate and prosecute environmental offenses which are complicated and wide-ranging. The decision to institute this special investigation team lies with the public prosecutor in close cooperation with the Inspectorate. This Environmental Assistance team operates in all parts of the country and has, at its disposal, equipment and laboratory facilities. This team has been handling an increasing number of cases during its short existence (since 1985). The availability of better information through the Central National Point for Environmental Crime, which is part of the Inspectorate, lead to actions more rapidly taken. Furthermore, the public prosecutor and the police have become more active, and the cooperation with lesser authorities intensified. Since 1985, more than 100 real criminal investigations have been conducted, of which 50 have been finalized for further processing with the public prosecutor. Twenty-five cases have led to convictions so far, ranging from penalties of over 100,000 Dutch guilders to imprisonments of more than three years. One case has been acquitted.

*** Condoning**

Any decision about the ways in which enforcement in the Netherlands has been practiced must include a remark on the issue of not enforcing, even though offenses have been ascertained the so-called offense of "condoning." In the past, this phenomenon was widely used and accepted, especially where authorities had to deliver the permit and were put in charge with the first line enforcement responsibility themselves. From the Ministry of the Environment, condoning should only be allowed in two cases: in case of the transition of legal regimes and in case of *force majeure*. This statement has also been underlined by the Minister of Transport and Public works in charge of the Clean Water Act.

*** Achievements**

In a period of five years, it was proven that the intensification of enforcement of environmental laws can show remarkable results.

The following prerequisites:

- political pressure to push enforcement;
- an operational and workable set of rules and regulations;
- a systematic approach to enforcement policies and strategies.

In the execution, the following should be available:

- sufficient funds to support systems;
- trained staff;
- infrastructure to absorb generated activities.

In the afore-mentioned period, thousands of compliance checks have been executed. Quite a number of these checks have resulted in some sort of enforcement by court action. More than 100 cases of very serious offenses have been reported, and fines and jail sentences been administered. An excellent cooperation between all authorities has been established and a yearly programme developed. An overall coordinating body has been created to bring together all the actors in charge with enforcement. In this coordinated body, under the guidance of the chief-inspector, the following authorities are represented:

- Ministry of Environment (Inspectorate-General)
- Ministry of Public works and Waterways
- Ministry of Justice (public prosecutors)
- Ministry of Internal Affairs.

as well as:

- the provinces
- the communities

and last but not least:

- the waterboards.

It is obvious that these vast tasks cannot be performed overnight and priorities should be set. The area that poses the biggest threat should be dealt with first. In the Netherlands, this appears to be the waste problem.

VII. INFRASTRUCTURE AND HUMAN RESOURCES FOR COMPLIANCE AND ENFORCEMENT

*** Institutional requirements**

The institutional requirements greatly depend on the structures of the laws and regulations in force and the judicial system applied in the countries concerned. The following general observations on the need of institutional structures can be made:

1. A separate organization, separate from the permitting one, should be put in charge of inspections on compliance and enforcement. Ample judicial assistance should be made available. It is of extreme importance to the credibility of this organization to establish their credibility to the outside world and acquire independence. Their reporting obligations should be very well controlled and should be directed to the highest responsible official. The reporting obligations of these officials in turn should not be within organizational structure of the permitting part of the organization, and should reach a politically responsible level.
2. The compliance and enforcement team that is put in charge with first line enforcement must have strong judicial support within their own organization.
3. An information centre for compiling data on environmental offenses or potential offenses, complaints and so on should be established. This information should be protected and only to be used by certified people in the organization.
4. A coordinating organization with all authorities in charge or involved with enforcement of either criminal, administrative or civil laws in the field of the environment, should be established. Systematic environmental enforcement programmes should be developed and coordinated through this body.

*** Human resources**

An example is given of the manpower requirements of an organization that has to check on compliance and that is capable of initiating an enforcement activity. This organization will not prosecute. The violations will be reported and booked in such a way that the public prosecutor can initiate court procedures. The officials will be in the position to advise as experts in the court cases.

VIII. CENTRALIZATION VERSUS DECENTRALIZATION

A basic issue in developing programs is whether to centralize responsibilities for enforcement at national level or decentralize at local levels. In general, one might state that enforcement at national level helps ensure at least minimum standards are met that an enforcement programme is consistent and fair through the country, and that national resources are available to support the programme. On the other hand, regional/provincial and community level are closest to the actual environmental issues and therefore can be better identified. The ways open to correct them are less cumbersome and more flexible.

As usual, there is not a clear cut division between the two alternatives. A ministry in development will always start its operation in a centralistic way. The development of an organization and a management, together with the employment of qualified personnel, will absorb all energy.

Once these initial barriers are passed, and a number of laws are promulgated, the need emerges to implement and control what has been developed. Many countries make use of existing infrastructure, delegating the execution of the laws to local authorities. An intermediate step is the erection of regional

offices from the central government reporting to the government. This intermediate step is, in many cases, very advantageous especially in those cases where national interests are of importance and the need for local knowledge is invaluable.

A potential disadvantage of decentralized authority is that the centralized government officials lose the sense of reality in policy-making and that feedback systems need a lot of attention.

It is of the utmost importance that in a decentralized system, a regular exchange of personnel between central government and local authorities takes place. The trend is that many countries are trying to decentralize as much as possible in order to take advantage of the local knowledge and to reduce their own staff. A few activities cannot be decentralized, like the control of transboundary pollution of waste, air and water. This holds, for example, in cases of enforcements of permits for nuclear power stations, potential high risk industrial complexes, and storage facilities of radioactive materials. The enforcement of international environmental laws and agreements will always be part of the duties of the central government (like the Basel Convention, Montreal Agreement).

In general, one can state that local authorities should be safeguarded against activities that outweigh their capability to handle.

The balance to strike depends on the governmental system chosen. It seems that enforcement strategy and planning in broad lines are the prerogative of the central government. The execution and detailed work is best decentralized. The central government should not lose contact with the work in the field through the establishment of enforcement task group for special and complicated cases. The same holds true for cases of transboundary importance that also requires high level political cooperation. A core group of specialists and well-trained officials should always be available at the central level.

IX. ALTERNATIVES TO RULES AND REGULATIONS

Although governments are, in many cases, very productive and creative in the promulgation of an increasing number of laws, rules and regulations complicating the life of their citizens, a trend is noticed to try to reduce these numbers. Governments nowadays promote awareness of the public, provide incentives for changes in processes, give tax reductions, low concessional loans and awards. Sometimes, governments like to strike agreements with branch organizations. These covenants, or gentlemen's agreements, are signed with the intention of the authorities to pass responsibility for certain environmental issue to these organizations. The advantage for the authorities is clear: they can reduce personnel or reroute human resources within the organization and compliance testing is not necessary for the time being. The advantage for the branch organization is obvious: no enforcement, no new rules and a certain degree of freedom to organize and achieve the goals of the government.

There are, of course, disadvantages. Democratic control is not always possible. There are no sanctions, in general, on non-compliance of the agreement, and when the scheme fails, the government has to take over and develop appropriate regulation anyway, with, in many cases, a considerable time delay.

X. CLEANER PRODUCTION AND TOXIC WASTES MINIMIZATION (promotion and regulations)

In connection with the thinking of sustainable development (UNCED agenda 21) in which a balance must be struck between economical development and environment in such a way that the activities can be carried out indefinitely, the ideas of cleaner production were adopted.

The experience of most governments in the development of laws and regulations is that they are difficult to create, implement, execute and enforce. So, the willingness of the governments to create a new set of regulations on cleaner production, if at all possible, has been minimal so far.

As it stands now, governments are looking also on the following lines:

- bring the responsibility for cleaner production to the producers;
- promote the principles of cleaner production through the application of a set of instruments like subsidies, awards, green labels for proper application of cleaner production processes; promote dissemination of cleaner production examples and so on;
- erect certification institutes that are able to certify that a process can be considered cleaner and is according to the state of the art of the moment and reaches the state of sustainability;
- promote voluntary application of "care systems" with industries and branch organizations.

Once it is known what can be achieved and once enough proven data can support the cleaner production philosophy and the transition of industry to cleaner production is not progressing fast enough, governments will be forced to incorporate cleaner production processes on a compulsory base by using the existing environmental regulatory framework of laws.

In most countries, the following laws, regulations and directives could fill this gap:

A. The Environmental Impact Assessment (E.I.A.)

In most EIA's, paragraphs are required that show the impact of the proposed activity. In more advanced EIA's, already a state-of-the-art analysis is required to prove that the process of production applied for is the best from their point of view and has minimal impact on the environment.

The EIA's should be further developed into the direction of an activity showing sustainability. The applicant should prove the sustainability and governmental agencies and/or the certification institutes must agree. Otherwise, no activity should be commenced or put into operation.

B. Permitting system

Most facilities require a permit. In many countries, an integral permit is obtained covering all sectors of the environment, in this way creating the possibility of weighing the acceptability or even better the sustainability of the activity. The last issue could be considered as an additional requirement in the permit. This means that the whole product life-cycle has to be taken into account and evaluated in the permit procedure. In many countries, permits have a limited period of validity and a revision permit has to be applied for. Rules could be issued that enforce a reconsideration of the activity.

C. Enforcement

Enforcement can only be used on systems that have to comply with a certain set of rules and regulations that are enforceable.

A philosophy cannot be enforced so enforcement only plays a role when clear rules are violated.

Cleaner production and minimization of wastes (going hand in hand) can only be enforced once sufficient proof from practicable examples is available and can be prescribed in permits.

From the above, one can imagine that governments are reluctant to impose cleaner production processes from the legal point of view.

Another reason is that, as soon as government prescribe a certain process or production, they are becoming also responsible for the consequences. In general, governments do not possess enough knowledge at the moment to able to prove without doubt that they are correct in their assumptions.

C.1 THE REGIONAL SEAS PROGRAMME

An Overview

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BACKGROUND

The Regional Seas Programme was created in 1974 as a global programme implemented through regional components. Agenda 21, the UN General Assembly and the Governing Council of UNEP have endorsed the regional approach to the management of marine and coastal resources, the control of marine pollution and the development of action plans.

The programme is under the overall co-ordination of the Oceans and Coastal Areas Programme Activity Centre (OCA/PAC) of UNEP. Under the direct policy guidance of the Executive Director, the Director of OCA/PAC is responsible for the implementation and co-ordination of the UNEP's Ocean Programme as defined by the Governing Council and the relevant regional inter-governmental meetings. However, the programme's success critically depends on the reiterative interaction with the Governments in the region, the work of specialized organizations (see Table 1) and centres dealing either with specific regions covered by the programme or with specific subjects common to most or all of the regions.

At present, the Regional Seas Programme includes thirteen regions world-wide with well over 140 coastal States and territories participating (see Figures 1 and 2). It is an action-oriented programme focussed not only on the mitigation or elimination of the consequences, but also the causes of environmental degradation. It has a comprehensive, integrated, result-oriented approach to combating environmental problems through the rational management of marine and coastal areas.

Structure of OCA/PAC

OCA/PAC consists of a central unit at UNEP Headquarters in Nairobi, which includes several regional coordinating secretariats/units for regions where it is financially impossible to establish a Regional Coordinating Unit (RCU). In a number of regions, regional Conventions govern the establishment of RCUs, and their location is determined by Governments (Athens, Bangkok, Kingston, Kuwait, Samoa, Santiago). Discussions are on-going for the establishment of Regional Coordinating Units in the Seychelles, North-West Pacific and Ivory Coast.

World-wide, OCA/PAC has a staff of about 30 professionals and more than 70 when general support staff is included.

THE REGIONAL SEAS PROGRAMME'S SUCCESSFUL RESULTS MODEL

The success that the Regional Seas Programme has had since its inception in 1974, almost twenty years ago, lies in its result-oriented approach or "results model," which differs somewhat from that presently proposed within UNEP, in that it has five additional features.

In the Regional Seas model, there is (1) an on-going reiterative consultation process with the client Governments on a regional basis [**client consultation mechanism**]; (2) all actions are contained in a one- or two-year action plan, scrutinized and subsequently approved by the client Governments at a regional Intergovernmental Meeting [**client approved time-frame**]; (3) through the regional Bureau/Monitoring Committees, the implementation of the approved action plan is checked midway between Intergovernmental Meetings [**implementation control mechanism**]; (4) for each action, a budget is approved by the client Governments, ensuring finances for full implementation [**assured funding**]; (5) *the thirteen Regional Seas Programmes are not dealt with in homogenized manner as if they are similar.* In fact, each Regional Seas Programme is tailored to the priorities in the region as perceived by the Governments of each region [**regional priority specificity**].

**TABLE 1: INTERNATIONAL AND INTERGOVERNMENTAL ORGANIZATIONS
WHICH WERE OR ARE INVOLVED IN THE REGIONAL SEAS PROGRAMME**

	Region	Organization
1.	Mediterranean	DHA-UNDRO, ECE, EEC, EIB, FAO, IAEA, ICAMAS, ICES, ICSEM, IMO, IOC, IUCN, MAB, UN, UNDP, UNESCO, UNIDO, WB, WHO, WMO
2.	Kuwait Action	FAO, IAEA, IMO, IOC, IUCN, ROPME, UN, UNCTAD
	Action Plan Region	UNDP, UNESCO, UNIDO, WB, WHO, WMO
3.	West and Central Africa	ADB, ECA, EEC, FAO, IAEA, IDB, IMO, IOC, IUCN, UN, UNDP, UNESCO, UNIDO, WHO, WMO
4.	Caribbean	ACOPS, CANARI, CARICOM, CCA, CEHI, INVESTAV, CPPS, ECLAC, FAO, IAEA, IDB, IMA, IMO, IOC, IUCN, OAS, UN, UNCHS, UNDOALOS, UNDP, UNESCO, UNICA, UNICEF, UNIDO, UWI, WB, WHO, WHO/PAHO, WMO
5.	East Asian Seas	ADB, ASCOPE, ASEAMS, ESCAP, FAO, IAEA, IMO, IOC, IUCN, UN, UNDP, UNESCO, WHO, WMO
6.	South-East Pacific	CPPS, ECLAC, FAO, IAEA, IMO, IOC, IUCN, OAS, UN, UNDP, UNESCO, UNIDO, WHO, WMO
7.	Red Sea and Gulf of Aden	ALECSO, ECA, FAO, IAEA, IMO, IOC, IUCN, PERSGA, UN, UNDP, UNESCO, UNIDO, WB, WHO, WMO
8.	South Pacific	ASPEI, EEC, ESCAP, FAO, FORUM SECRETARIAT, IAEA, IMO, IOC, IUCN, SPC, SPOCC, SPREP, USP, UNCTAD, UNDP, UNESCO, WB, WHO, WMO
9.	Eastern Africa	ADB, ECA, FAO, IAEA, IMO, IOC, IUCN, EC, UN, UNDP, UNESCO, UNIDO, WHO, WMO
10.	South Asian Seas	ADB, ESCAP, FAO, IMO, IOC, IAEA, IOMAC, IUCN, SACEP, UN, UNDP, UNESCO, UNIDO, WHO, WMO
11.	Black Sea	FAO, IAEA, IMO, IOC, UNDP, WB, WHO, WMO
12.	North-West Pacific	ADB, IAEA, IMO, IOC, UNDP, UNESCO
13.	South-West Atlantic	COMAR, FAO, IMO, IOC, IUCN

FIGURE 1 (to be inserted)
THE REGIONAL SEAS PROGRAMME

FIGURE 2 (to be inserted)
REGIONAL SEAS PROGRAMME: NUMBER OF COUNTRIES INVOLVED

THE REGIONAL ACTION PLANS

Each regional action plan, i.e. the substantive part of any regional programme, is designed to link assessment of the quality of the marine environment and the causes of its deterioration with response actions for the management and development of the marine and coastal environment. The regional action plans promote the parallel development of regional legal agreements.

The regional action plan is formally adopted by an intergovernmental meeting of the Governments of a particular region before the programme enters an operational phase. The budget for the implementation of the action plan is similarly discussed with, and approved by, the Governments in the region. In the preparatory phase leading to the adoption of the action plan, Governments are consulted through a series of meetings and missions, about the scope and substance of an action plan suitable for their region. In many of the regions, Governments contribute to trust funds to assist in the financing of programme implementation. Development banks play a significant financing role in a number of regions.

In addition, with the cooperation of appropriate global and regional organizations, reviews on the specific environmental problems of the region are prepared in order to assist the Governments identify the most urgent problems in the region and the corresponding priorities assigned to the various components of the action plan. UNEP co-ordinates directly, or in some regions indirectly, through existing regional organizations, the preparations leading to the adoption of the action plan by the Governments in the region.

All action plans are structured in a similar way, although the specific activities for any region are dependent upon the needs and priorities of that region. An action plan usually includes the following components:

- (a) *Environmental assessment* of the causes of environmental problems as well as their magnitude and impact on the region.
- (b) *Environmental management*, including training in environmental impact assessment, management of coastal lagoons, estuaries and mangrove ecosystems, control of industrial, agricultural and domestic wastes and formulation of contingency plans for dealing with pollution emergencies.
- (c) *Environmental legislation* elaborated by specific technical protocols, most often providing the legal framework for co-operative regional and national actions.
- (d) *Institutional arrangements* for the permanent or interim secretariat of the action plan.
- (e) *Financial arrangements* for UNEP, together with selected United Nations and other organizations, to provide "seed money", i.e. catalytic financing, in the early stages of regional programmes. However, as a programme develops, it is expected that the Governments of the region will progressively assume full financial responsibility. Government financing is usually channelled through special regional trust funds to which Governments make annual contributions.

An important element in the success of any regional seas action plan is the political agreement of the Governments concerned and the execution of the programme primarily by national and other appropriate institutions from the region in close co-operation with the relevant components of the United Nations system, regional organizations and other appropriate organizations.

The successful implementation of any regional seas action plan also depends to a considerable degree on sound preparations which take into account the specific socio-economic and political situation in a given region, the priorities in environmental protection as defined by the governments of the region, the recognized capabilities and needs of the national institutions which are participating in the action plan, and the results of past and ongoing activities.

OVERVIEW OF THE REGIONAL SEAS PROGRAMMES

Some of the basic facts about the Regional Seas Programme are summarized below:

Mediterranean Action Plan. Geographic coverage: 21 States participating in the Action Plan (Albania, Algeria, Bosnia and Herzegovina, Croatia, Cyprus, Egypt, France, Greece, Israel, Italy, Lebanon, Libya, Malta, Monaco, Morocco, Slovenia, Spain, Syria, Tunisia, Turkey and Yugoslavia). Action plan adopted in 1975. Convention signed in 1976; entered into force in 1978. EEC is one of the participants in the Action Plan and is Party to the Convention. Secretariat: UNEP.

Kuwait Action Plan. Geographic coverage: 8 States participating in the Action Plan (Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and United Arab Emirates). Action plan adopted in 1978. Convention signed in 1978; entered into force in 1979. Secretariat: Regional Organization for the Protection of the Marine Environment (ROPME).

West and Central African Action Plan. Geographic coverage: 21 States participating in the action Plan (Angola, Benin, Cameroon, Cape-Verde, Congo, Côte d'Ivoire, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mauritania, Namibia, Nigeria, Sao Tome and Principe, Senegal, Sierra Leone, Togo and Zaire). Action plan adopted in 1981. Convention signed in 1981; entered into force in 1984. Secretariat: UNEP.

Caribbean Action Plan. Geographic coverage: 25 States participating in the Action Plan (Antigua and Bermuda, Bahamas, Barbados, Belize, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, St. Christopher and Nevis, St. Lucia, St. Vincent and Grenadines, Suriname, Trinidad and Tobago, United States of America and Venezuela) and the Caribbean territories of France, Netherlands and the United Kingdom. Action plan adopted in 1981. Convention signed in 1983; entered into force in 1986. EEC is one of the participants in the Action Plan and signed the Convention. Secretariat: UNEP.

East Asian Seas Action Plan. Geographic coverage: 5 States participating in the Action Plan (Indonesia, Malaysia, Philippines and Thailand). Action plan adopted in 1981. Convention expected to be negotiated during 1991. Secretariat: UNEP.

South-East Pacific Action Plan. Geographic coverage: 5 States participating in the Action Plan (Chile, Colombia, Ecuador, Panama and Peru). Action plan adopted in 1981. Convention signed in 1981; entered into force in 1986. Secretariat: Permanent Commission of the South Pacific (CPPS).

Red Sea and Gulf of Aden Action Plan. Geographic coverage: 7 States participating in the Action Plan (Egypt, Jordan, Palestine, Saudi Arabia, Somalia, Sudan and Yemen). Action plan adopted in 1982. Convention signed in 1982; entered into force in 1985. Secretariat: Arab League Educational, Cultural and Scientific Organization (ELLECSO).

South Pacific Action Plan. Geographic coverage: 16 States participating in the Action Plan (Australia, Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Solomon Islands, Tonga, Tuvalu, Vanuatu and Western Samoa) and the South Pacific territories of France, United Kingdom and the United States of America. Action plan adopted in 1982. Convention signed in 1986 and entered into force on 18 August 1990. Secretariat: South Pacific Commission (SPC).

Eastern African Action Plan. Geographic coverage: 8 States participating in the Action Plan (Comoros, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, Somalia and United Republic of Tanzania) and the Eastern African territories of France. Action plan adopted in 1985. Convention signed in 1985. EEC is one of the participants in the Action Plan and signed the Convention. Secretariat: UNEP.

South Asian Seas Action Plan. Geographic coverage: 5 States participating in the Action Plan (Bangladesh, India, Maldives, Pakistan and Sri Lanka). Action plan and convention expected to be adopted in 1994. Secretariat: UNEP.

North-West Pacific. Geographic coverage: 5 States participating in the Action Plan (China, Japan, North Korea, South Korea and Russia). Action plan under development.

Black Sea. Geographic coverage: 6 States participating in the Action Plan (Bulgaria, Georgia, Romania, Russia, Turkey and Ukraine). The Convention was signed on 22 April 1992 and the Declaration was signed on 4 April 1993.

South-West Atlantic. Geographic coverage: 3 States participating in the Action Plan (Argentina, Brazil and Uruguay). Preliminary discussions are being held on the drafting of a regional action plan.

[Arctic]. First exploratory steps are being taken towards the establishment of a Regional Seas Programme in the region.

INTERREGIONAL ACTIVITIES

Integrated Coastal Area Management

Early in 1991, it was decided to reshape OCA/PAC to meet the requirements of the Governments in a more effective manner. OCA/PAC, as the overall coordinating unit, was to be regarded as a "holding company," with the Regional Seas Programme as the operational arm, while all operations within the programme were brought under the umbrella of integrated coastal area management. This meant that all global/interregional activities were built up of regional components and all regions have global components.

This reshaping was fortuitous in that eighteen months later, in Rio, integrated coastal area management was the first provision in Chapter 17 of Agenda 21. The fact that OCA/PAC's Deputy Director was seconded to the UNCED Secretariat for the preparatory process was not entirely unrelated to this.

The Regional Seas Programme presently has numerous activities in the area of integrated coastal area management, including projects, training, awareness exercises, seminars, workshops, curriculum development, etc. and is taking a lead role on issues such as *land-based sources of pollution, environmental economics and natural resource accounting, and small islands*. In some of the major activities it co-operates closely with the World Bank and, FAO but also with most of the other UN agencies.

Global Investigation of Pollution in the Marine Environment (GIPME)

GIPME originated in 1974 and gradually evolved into one of the IOC's major programmes. Over the years, there have been numerous co-operative ventures between GIPME and the marine pollution monitoring and research components of the Regional Seas Programme. The joint IOC-UNEP sponsorship of GIPME will ensure the maximum co-ordination of the marine pollution programmes of IOC and UNEP and the rational utilization of resources for an accelerated implementation of the marine pollution related programmes of the two Organizations.

Monitoring of Climate-Related Changes

In view of the recognized need for a comprehensive and well-coordinated long-term global monitoring programme to observe the changes in phenomena related or which may be related to climate changes, IOC, WMO and UNEP expressed interest in launching such a programme, which would take into account and full advantage of ongoing international, regional and national programmes in this area such as the World Ocean Circulation Experiment (WOCE), Tropical Oceans and Global Atmosphere (TOGA), Global Ocean Flux Study (GOFS), Integrated Global Ocean Service System (IGOSS), Global Sea Level Observing System (GLOSS), etc.

GESAMP

A leading role in the assessment of global marine pollution problems involving the interest of the United Nations system is played by GESAMP, the IMO/FAO/UNESCO/WMO/WHO/IAEA/United Nations/UNEP-sponsored Joint Group of Experts on the Scientific Aspects of Marine Pollution. It was established in 1969 to provide advice relating to the scientific aspects of marine pollution to its sponsors and to other organizations of the United Nations system and to the Member States of the United Nations. It also prepares periodic reviews of the state of the marine environment as regards marine pollution and to identify problem areas requiring special attention.

PROTECTION AND MANAGEMENT OF MARINE LIVING RESOURCES

The biological component of the seas is still relatively poorly understood and thus difficult to protect and manage. However, the rapid development of new technologies ranging from remote sensing to the molecular level, is creating new practical possibilities for the assessment, monitoring and management of living marine resources.

Recognizing the wider role and mandate of FAO, UNEP has in the past restricted its activities in this area

- protection of species and specially protected areas in the context of the regional seas programmes;
- groups of organisms or ecosystems which are commercially not exploited by fisheries operations, such as coral reefs; and
- marine mammals in general.

However, with the growing concern about the broader environmental impacts of fisheries activities such as aquaculture and driftnet fishing and the need to consider living marine resources in integrated coastal zone management, there is increasing collaboration with FAO on subjects of common interest.

C.1. PRESENTATION OUTLINE:

THE REGIONAL SEAS PROGRAMME

Presented by:
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- C.1.1. Introduction
- C.1.2. The Eastern African Region
- C.1.3. The Action Plan for Eastern African Region
- C.1.4. The Action Plan and the Kenya's National Laws
- C.1.5. Conclusion

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COUNTRY PRESENTATION OF THE JAMAICA REGIONAL SEAS PROGRAMME - THE WIDER CARIBBEAN REGION

Leonie Barnaby

The Caribbean Environment Programme (CEP) falls within the purview of the Regional Seas Programme with which there is a direct line relationship. The day-to-day secretariat functions of the Caribbean Environment Programme are carried out by the Regional Coordinating Unit, located in Kingston, Jamaica.

Culturally, the Caribbean region is abundantly endowed. Its people spring from five continents contributing to a rich and vibrant collage of races, religions, customs and ethnic groups. It is a region of great energy, great tension, great abundance and paradoxically, a region of great scarcity, on the one hand booming with a richness of cultures, and suffering from great economic disparities, on the other.

This report deals with the Action Plan for the Caribbean Environment Programme, as well as the Convention and Protocols - the legal framework for cooperative regional and national actions.

The areas to be considered are:

- 1) An overview of the wider Caribbean Region
- 2) An outline of the main programmes of the Action Plan
- 3) The short-term strategy of CEP
- 4) The status of the Convention and Protocols
- 5) Assessment of the CEP
 - a) The perspective of the experts to assess the effectiveness of regional seas agreements
 - b) A Jamaican perspective

1. The Wider Caribbean Region

The Caribbean is an area of great geographic importance - it includes many shipping areas that are vital to international commerce. This region includes the "marine environment" of the Gulf of Mexico, the Caribbean Sea, and the areas of the Atlantic Ocean adjacent thereto. Thirty-three nations and territories comprise the region - the islands of the Greater and Lesser Antilles to the East; the islands of the Bahamas to the North, the US Gulf Coast states; coastal Mexico, Central America, and the northern tier states of South America. The Region is characterized by diversity - of peoples, cultures, languages, terrestrial and marine ecosystems, and institutional, legal and technical capabilities.

However, in sharing a common resource - their regional seas, the states and nations of the region have joined in pursuit of a common goal - the protection of the marine and coastal environment through the promotion of balanced and sustainable economic development.

2. An Outline of the Action Plan

The Action Plan resulted from many years of work by governmental and NGO representative of the Caribbean Community (CARICOM) assisted by UNEP and the Economic Commission for Latin America and the Caribbean (ECLAC). The Action Plan was adopted by 22 states and territories in Montego Bay, Jamaica in April 1989. The main activities under the Action Plan are the following six mutually reinforcing programmes:

- I. Overall coordination and common costs of the Programme (OCCC)
- II. Regional Programme for Specially Protected Areas and Wildlife (SRAW)
- III. Regional Programme for the Assessment and Control of Marine Pollution (CEPOL) [UNEP/IOC]
- IV. Regional Programme on Integrated Planning and Institutional Development for the Management of Marine and Coastal Resources (IPID)
- V. Regional Programme on Information Systems for the Management of Marine and Coastal Resources (CEPNET)
- VI. Regional Programme on Education, Training and Awareness for the Management of Marine and Coastal Resources (ETA)

3. Short-term Strategy for the Development of the Caribbean Environment Programme

A short-term strategy for the Programme has been agreed for the period 1990-1995.

Phase I (1990-1991)

This is the programme development phase, to assist countries in understanding the integrated nature, extent and causes of environmental degradation in the wider Caribbean. Consolidation of the Regional Coordinating Unit (RCU). It includes the definition of six mutually reinforcing programmes for the initiation of the strategy implementation process.

Phase II (1992-1993)

Identification and preparation of investment projects and institution-strengthening activities at the national and regional levels, definition of guidelines and policy measures for the programmes.

Phase III (1994-1995)

Implementation of regional and national investment projects and policy measures. Development of a long-term plan of investments to be complemented in 1996-2001 to address:

- i) Control of land-based and maritime sources of pollution;
- ii) Protection of marine and coastal habitats and species;
- iii) Strengthening of the institutional base of regional and national institutions.

4. The Status of the Convention and its Protocols

The Convention for the Protection and Development of the Wider Caribbean Region was adopted in Cartagena, Colombia in March 1983. The Convention is a comprehensive umbrella agreement for the protection and development of the marine environment. It lists the sources of pollution which require control:

- Pollution from ships
- Dumping
- Land-based sources
- Sea-bed activities
- Airborne pollution

The Convention also identifies environmental management issues for which cooperative efforts are to be made; specially protected areas, cooperation in cases of emergency, environmental impact assessment, and scientific and technical cooperation. There is also an article on liability and compensation. It is expected that by the time of the next intergovernmental meeting now scheduled for early 1994, most if not all of the eligible member states (29 including the EEC) will have acceded to the Convention.

5. Assessment of the Caribbean Environment Programme

a) The Perspective of Experts to Assess the Effectiveness of Regional Seas Programmes

The Report of the Wider Caribbean prepared for the meeting of experts held in Nairobi, 6-10 December 1993 stated that:

"The programme has been effective in:

- promoting regional policies
- supporting the development of national environmental legislation
- contributing to capacity building, public awareness and exchange of information."

The report noted several areas for attention, including:

- the promotion of better exchange of information between the environment ministries of member States;
- a focus on specific needs when planning future projects and less attention to the discussion of generalities;
- the establishment of new, clean technologies at the regional level;
- exchange of information with other regional seas programmes.

b) A Jamaican Perspective

The CEP is two-thirds of the way through its short-term strategy. Jamaica has benefited particularly from programmes under CEPOL, in terms of coastal zone management; IPID, in terms of the Environmental Management of Heavily Contaminated Bays and Coastal Areas Project under which research on Kingston Harbour will be carried out; and SPAW, in the conservation of endangered and threatened species.

It seems that there is, however, the need for a closer relationship between Jamaica and the Programme. For example, national park legislation was recently developed without the benefit of the expertise on this subject of the Regional Coordinating Unit.

The presence of the RCU could be more strongly felt in the individual countries, and this is an area, certainly in the case of Jamaica, to be explored.

The meeting of financial obligations by governments in the region is another matter requiring urgent attention.

CONCLUSION

There is an active programme in the Wider Caribbean that has benefited from the involvement of several bodies and international agencies other than UNEP, NGOs and Government Agencies. There are several very useful projects underway, but it is up to Governments to see that their involvement in the Action Plan and the treaties is meaningful.

As CEP Technical Report No. 5 (1990) states:

"The problem of the Region cannot be solved by any one national institution, regional organization or international body. The Caribbean Environment Programme as a multilateral initiative, is based on a cooperative approach ... (for the promotion of) sound management principles..."

All involved must play their part.

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**D.1. PRESENTATION OUTLINE:
THE GLOBAL ENVIRONMENTAL FACILITY**

Presented by:
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D.1.1 The pilot phase

- (a) What is the GEF?
- (b) What are the origins of the GEF?
- (c) Who runs the GEF?
- (d) How much countries are members of the GEF?
- (e) Which countries are eligible for GEF funding?
- (f) How are projects identified for GEF funds?
- (g) How is an application filed for GEF funds?
- (h) How are projects approved?
- (i) How many GEF projects have been approved?
- (j) What is the balance between the four thematic areas covered by GEF?
- (k) What decisions were taken regarding the GEF at UNCED?
- (l) How are GEF projects related to overall policies in implementing countries?
- (m) Can the costs of research be covered by the GEF?

D.1.2 Restructuring

- (a) Has the GEF been restructured?
- (b) What is the timetable for the restructuring?
- (c) How will decisions be made in the restructured facility?
- (d) Is the GEF sufficiently transparent?
- (e) Will the role of the three implementing partners remain the same in the post-pilot phase?
- (f) How are the GEF's scientific and technical criteria for eligibility and priorities for selection of projects being revised for the post-pilot phase?

**Summary of Presentation to UNITAR Training Workshop
at UNEP, Nairobi, Nov/Dec 1993**

(Subject: The Global Environment Facility)

Presentation by Agi Kiss,
The World Bank
Regional Mission in Eastern Africa
(Summary prepared 5/18/94)

GEF: The Pilot Phase (1989-93)

What is the GEF? The GEF is a special fund established to assist developing countries implement projects and activities to benefit the global environment. It represents a source of incremental specially targeted to address "global externalities," which individual countries cannot be expected to address simply in their own national self-interest. It is not meant to be an umbrella fund to help countries address environmental problems which are primarily of significance to them alone, however important and urgent those problems may be. Thus, it is a "fund for the **global environment**", and not a "global fund the for environment".

What are the origins of the GEF? The GEF was established by a group of interested governments (led by Germany and France) who agreed to contribute to a trust fund (officially called the Global Environment Trust, or GET). These countries are collectively called the "GEF Participants". The GEF Participants requested the World Bank to administer the GET, and to implement the Facility along with UNDP and UNEP. The GEF was launched in 1989, for a three-year "pilot phase".

Who runs the GEF? Each of the three implementing agencies (World Bank, UNDP and UNEP) has specific roles to play in the GEF: the World Bank administers the GET and is responsible for assisting countries to identify and implement investment projects; UNDP is responsible for "technical assistance projects" and UNEP is primarily responsible for overall scientific guidance, including the establishment of a "Scientific and Advisory Panel" which is mandated to establish overall guidelines and criteria for GEF projects. The GEF Participants also play a major in running the GEF. First, it was the Participants who established the ground rules (e.g., the eligible categories of projects). Second, the Participants continue to set overall policy as the program is being implemented (e.g. calling for an equitable geographic distribution of GEF grants). Third, every 6 months the implementing agencies present a proposed work program to the Participants for their approval.

GEF membership and eligibility for GEF funding: About 60 countries have become GEF Participants, i.e. have contributed to the facility (some to the core fund and some through various co-financing arrangements). This includes some developing countries as well as industrialized countries. A country need not be a GEF Participant in order to be eligible to receive GEF funding: the basic eligibility criterion for receiving a GEF grant is that the country be eligible to receive credits under the International Development Association (i.e. the "soft loan" window of the World Bank) based on a ceiling national per capita GDP.

The process of project identification and approval: Project concepts may be proposed by any source (government, international NGO, national NGO, staff of an implementing agency) but the government involved must endorse the proposal very early on in the project preparation cycle. Normally project concepts are brought to one or another of the Implementing Agencies with a request that the project be considered for that agencies "project pipeline". If the implementing agency considers it to be a good candidate and agrees to pursue it, it will be included in the proposed "pipeline" which that agency

presents to the "implementation Committee", (I.C.) which comprises representatives of all three implementing agencies. (Projects proposed to the World Bank must go through an independent review by a Technical Review Panel before being included in the proposed "project pipeline"). The I.C. meets every few months to consider such proposals and eventually agrees on an overall 6-month work program ("tranche") to present to the GEF Participants at the next semi-annual meeting. Once a given project is approved by the Participants as part of the work program, the implementing agency which initially presented it to the I.C. is responsible for working with the government involved to complete project preparation, and to appraise and approve the project according to its own normal procedures. Note that this complicated process sometimes leads to some confusion, as a project may be authorized by the I.C. and the GEF Participants for inclusion in the work program long before it is actually approved by the implementing agency and the grant can actually be made. So far, a large number of projects have been authorized, but only a very few have been approved.

Balance of thematic areas: The four thematic areas (reducing atmospheric concentrations of greenhouse gases (global warming), conservation of biodiversity, reducing degradation of international waters and reducing atmospheric concentrations of ozone depleting substances) were established by the GEF Participants when the GEF was initially set up. There was no formal division of the total resources among the thematic areas initially, but as time progressed the Participants indicated that they expected about half of the total funds to go toward the "global warming" category, about equal amounts to biodiversity and international waters, and only a very small proportion to ozone protection (as this was primarily catered for under the Montreal Protocol Interim Fund).

GEF and research: "Research" was not initially envisioned as an activity to receive GEF funding to any significant degree. Over time, however, it became clear that some types of applied research were needed in order to be able to develop approaches to address the thematic areas in an effective and efficient manner. Therefore, a number of research-oriented projects, largely under the auspices of UNEP, have now been authorized for GEF funding.

GEF, UNCED and the Global Environmental Conventions: Initially there was no formal or explicit linkage between the GEF, which was a completely voluntary undertaking by a self-selected group of countries, and the future UN Conference on Environment and Development. As the date for UNCED approached, however, it became clear that one of the major issues would be associated funding mechanisms, and a controversy arose over whether the GEF would continue past the 3-year pilot phase and be designated as the sole or main mechanism for transfer of resources for implementation of those aspects of Agenda 21 which related to global environmental issues (particularly the existing 4 GEF categories). The final decision emerging from UNCED was that the GEF would continue with the same 4 categories, and would also be the interim international financing mechanism of the international conventions on Biodiversity Conservation and on Climate Change, at least until such time as the parties to those conventions decided to develop or use an alternative mechanism.

Relation between GEF policies, national policies and traditional development assistance (for environment and sustainable development): Every GEF project must have the endorsement and backing of the government and therefore must be consistent with national policies and structures. However, GEF projects normally would not fund the activities which government policies establish as the nation's highest environmental priorities, as these are likely to concern national, rather than global issues. The normal bilateral and multilateral (e.g. World Bank) funding mechanisms will continue to be the main mechanism for assisting countries to address their high priority national environmental concerns. At the same time, however, it is expected that national and global environmental concerns will often overlap, such that GEF projects will in many cases contribute to addressing national priorities at least to some extent.

**D.3. BIBLIOGRAPHY OF SELECTED TRAINING MATERIAL:
GLOBAL ENVIRONMENTAL FACILITY (GEF)**

- D.3.1. "Global Environment Facility. The Pilot Phase, Restructuring and Replenishment", UNDP, GEF NGO Small-Grants Program, September 1993
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COUNTRY PRESENTATION BY BARBADOS ON THE GLOBAL ENVIRONMENT FACILITY (GEF)

Woodbine Davis QC

As stated earlier, Barbados is a small island developing state in the Caribbean. It is 430 square meters in area (or 166 square miles), and is heavily populated. The present population growth rate is 0.24 annually. The main revenue earners are tourism, agriculture, mainly sugarcane farming, light industries and some fishing. The social structures and services are relatively substantial. The educational focus is sharp and it is believed that this has contributed to the high social and occupational mobility of the population. The per capita income is US\$6370. I have enumerated the above to show how the criteria and objectives of the GEF impact on the Barbados situation with regard to climate change and marine pollution. They are:

- (a) To support energy conservation there must be greater use of energy sources which will not contribute to global warming. Also, better forestry management techniques and reforestation must take place to absorb carbon dioxide in order to limit the increase in greenhouse gas emissions.
- (b) To preserve areas of rich ecological diversity.
- (c) To protect international waters where transboundary pollution has had a damaging effect on water purity and the marine environment in general.
- (d) To arrest the destruction of the ozone layer by helping countries make the transition from the production and use of CFCs and other ozone depleting gases to less damaging substitutes.

It is to be noted that only countries which have a per capita income of US\$4000 have access to the GEF. The facility has a target for concession financing to eligible countries for initiatives supportive of sustainable development as outlined above.

Barbados supports the concept of the GEF since it provides new and additional financing to support sustainable development goals, particularly in developing countries. We find however that there are a number of concerns about the facility. The particularly determining factor is that only countries with per capita income of roughly \$4,000 have access to the facility. This therefore puts countries like Barbados at a disadvantage, and in consequence they are penalized because they have achieved a satisfactory standard of living by exploiting their resources. The per capita cut-off point for accessing to GEF does not necessarily imply that a country has the means to respond adequately to global environmental issues without external assistance.

We also hold that consideration should be given to the ecological characteristics of individual countries, and to the use of project and manpower criteria. It also seems that there is a weakness in the GEF in that it has an orientation towards global environmental problems, whereas resources are needed to assist regions and countries in adjusting to and mitigating environmental problems.

We also hold that often, environmental problems resulting from such conditions such as poverty are equally important, but they are not addressed by the GEF. In our view, what is needed is the formulation of criteria which do not put some developing countries at a disadvantage. A set of criteria that recognizes the individual situations of countries with their peculiar ecological and environmental characteristics should be considered.

In conclusion, we have the political will as evidenced by our enactment of over 30 pieces of environmental legislation, to address the problems presented by environment degradation. In addition, we have established a host of institutions/agencies to support the legislative mechanisms in place. However, it is plain that without adequate funding from external sources such as the GEF, developing countries such as Barbados are disadvantaged. It is hoped that this problem can be addressed.

**UNEP/UNITAR TRAINING PROGRAMME
IN
ENVIRONMENTAL LAW AND POLICY**

ANNEX I

LIST OF PARTICIPANTS AND RESOURCE PERSONS

REV. 1

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29 November - 17 December 1993

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Hussein Abaza has a B.A. in Economics from the American University in Cairo (1973) and a M. Phil. from the University of Bradford, United Kingdom in Urban Housing Planning (1981). He has joined the United Nations Environment Programme (UNEP) in 1982, where he has served in various capacities. Main posts held were as Coordinator of the African Ministerial Conference on the Environment (AMCEN), the objective of which were the implementation a programme aimed at strengthening cooperation between African countries in economic, technical and scientific activities, he has also functioned as the Coordinator of the Committee of International Development Institutions on the Environment (CIDIE) established in 1980 and currently signed by seventeen international development assistance institutions. CIDIE, the Secretariat of which provided by UNEP, was formed to assure that the policies of the signatories are environmentally aware as well as scientifically informed, politically valid, and economically responsible. He has also functioned as a Special Assistance to the Executive Director UNEP. In 1992 H. Abaza has been entrusted with the responsibility of initiating and developing a coherent and integrated programme on environmental and Economics for UNEP, which has been recently endorsed by the UNEP Seventeenth Session of the Governing Council held in May 1993. Prior to joining UNEP H. Abaza has worked with the United Nations Department for Technical Cooperation and Development (1973-1979) which has now been incorporated in the Department of Development Support and Management Services, as a Manager for the Centre of Planning and Architecture Center in Cairo, Egypt (1980) and a Branch Manager of an International Financial and Investment Institution in Riyadh, Saudi Arabia (1981). H. Abaza is now heading the Environment and Economics Unit of UNEP.

Alexander Alusa is a Programme Officer in the Climate Unit of the United Nations Environment Programme (UNEP) in Nairobi, Kenya. He is interested in the Science of Climate Change, its impact on Socio-economic System and what policy options need to be set in place to respond to Climate Change and its impacts and facilitate the networking of scientists working in these areas. He worked for many years as a research Meteorologist in Kenya, rising to become Director of Meteorological Services in 1984. He holds a B.Sc. degree in Mathematics from Oregon State University (1969) and a Master of Science degree in Atmospheric Science (Cloud and Precipitation Physics) from the State University of New York at Albany (1971). His research interests range from climate change to cloud and precipitation physics with emphasis on the physics of hail growth. He has carried out detailed research on hailstorms in Kericho/Nandi Hills area of Kenya - their origins, characteristics and microphysics. He joined UNEP in 1989 as a Programme Officer and presently helps coordinate the World Climate Impact Assessment and Response Strategies Programme (WCIRP) of the World Climate Programme. He presently is involved in catalyzing drought preparedness and early warning in parts of Africa and the rest of the third world with a view to ensuring Famine early warning.

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Rob Glaser has an extensive professional experience, covering some 30 years working internationally and in The Netherlands, in the environmental sector. Currently he is involved in missions for the UNEP, the EC and ESCAP to Greece, Portugal, Ghana, India, Thailand, Hong Kong, Sri Lanka, Bulgaria and United Arab Emirates, all dealing with environmental aspects. Among the organizational aspects in the management of ministries of environment in developing countries he has been actively involved in the formulation of support programmes for the development of inspectorate for the environment. He is now in charge of coordinating a network of inspectors within the 12 E.C. countries. At the start of his career Mr. Glaser has been concerned

with environmental improvements through the control of petro-chemical processes whereby trouble shooting and the design and operation of technically advanced operating units ensured that harmful discharges and emissions into the environment were minimized. As Senior Technologist he was responsible for financial project control and appraisal, developing and designing integrated energy systems.

Lothar Gundling received his Doctorate in Law from the University of Frankfurt in 1981. From 1976 to 1990 he was a Fellow at the Max-Planck Institute for Comparative Public Law and International Law, in Heidelberg, dealing with international environment law and the law of the sea. He became a lecturer in constitutional law at several German and American universities. He has carried out consultancies and advisory activities for the German Parliament, German Federal Environment Protection Agency, European Parliament and international environment organizations. In 1990 he joined IUCN as project coordinator at the Environmental Law Centre coordinating the legal technical assistance to developing countries, covering a variety of environmental laws which included, conservation, pollution, EIA, institution building and environment protection. He has published 7 books and over 50 articles and essays on comparative environmental law, international environmental law and the law of the sea. Since 1991 he is the associate editor of the publication "The Yearbook of International Environmental Law". He is a member of several international law association and societies.

Mark Hildebrand received a BA from Yale University (1969) and an MA from the School of Architecture and Planning, Yale University (1972). After receiving his master's degree, Mr. Hildebrand worked in private practice as an architect, builder and consultation for various private and public sector clients and large corporations including the Johns-Manville corporation, the New York State Urban Development Corporation and Sarabhai Enterprises in Ahmedabad, India. He holds eight United States Patents for designs he developed during this period. Mr. Hildebrand joined the U.N. system in 1976 and has been posted in: N'Djamena, Chad, where (from 1976-79) he managed a large-scale rural school construction project building 60 rural primary schools and facilitating successful negotiations between the Government of Chad, the World Bank and UNDP for the World Bank's Third Education Project in Chad; in Antananarivo, Madagascar, where he prepared and negotiated with the Government of Madagascar, the World Bank, UNDP and UNCHS (Habitat) an integrated urban development pre-investment project, subsequently implemented by the Government with the support of UNDP, UNCHS (Habitat) and the World Bank; and from 1980 to the present at UNCHS (Habitat) Headquarters in Nairobi, Kenya Mr. Hildebrand is currently Chief of the Technical Cooperation Division of UNCHS (Habitat). He is responsible for the overall management of Habitat's operational activities in support of national, regional, interregional and global action. He has been instrumental in launching the Urban Management Programme and many of Habitat's other large-scale global partnership programmes. Habitat's technical cooperation programme presently includes over 250 ongoing projects in close to 100 countries with project budgets totalling over \$180 million.

Jan Huismans was trained as a biologist at the State University Utrecht (Netherlands). He worked as a toxicologist and as a toxicological adviser for the Dutch Organization for Applied Scientific Research (TNO) and the Dutch Health Council, respectively. From 1977 to April 1993, he was Director of the International Register of Potentially Toxic Chemicals (IRPTC) which is a Programme Activity Centre of the United Nations Environment Programme (UNEP), based in Geneva. He is now Assistant Executive Director for Earthwatch Coordination and Environmental Assessment at UNEP Headquarters in Nairobi.

Douglas Hykle is a Programme Officer of the UNEP-administered secretariat of the Convention of Migratory Species of Wild Animals, based in Bonn, Germany. Since joining the Secretariat in 1991, he has been responsible for the development and promotion, under the Convention's auspices, of several multilateral Agreements for the conservation of migratory species. He received his Masters Degree from Dalhousie University, Canada, for an assessment of Canada's implementation and enforcement of the Convention on International Trade in Endangered Species (CITES). He joined UNEP in 1988 and was attached to the UNEP/CITES Secretariat, based in Switzerland, until taking up his present post.

Agi Kiss B.A. Cornell University, 1976. M.Sc. and Ph.D. University of Michigan (in Ecology, specialization in insect ecology). She is currently Senior Ecologist, Agriculture and Environment Division, Eastern Africa Department, World Bank Nairobi. She is also (1) The Task Manager for IDA-financed Kenya "Protected Areas and Wildlife Services" project, and for two CEF projects currently under preparation (Uganda: conservation of Bwindi Impendetrable and Ngahinga National Parks; Kenya: Conservation of the Tana River Primate National Reserve; (2) general technical support on environmental issues in Eastern Africa. After her Ph.D in 1983, she did a post-doctoral work at US Department of Agriculture. In 1984 she received a one year USAID Fellowship (American Association for the Advancement of Science) and worked on pest management and pesticide-related issues. In 1985 she joined the World Bank, Office Environment and Scientific Affairs, as a consultant, and later joined the Technical Department (Environment Division) for Africa (AFTEN) and where she became a permanent staff member. While with AFTEN, she served as GEF coordinator for the World Bank Africa Region from the beginning of the programme until her present job.

Lal Kurukulasuriya LL.B, M.Phil (International Law) is currently Chief of Environmental Law Education, Training and Information Division at UNEP's Environmental Law and Institution Programme Activity Centre. Prior to joining UNEP, he held positions of Legal Advisor to the Ministry of Foreign Affairs of Sri Lanka, Ambassador of Sri Lanka to Sweden and other Nordic Countries (1982-1987) and Assistant Secretary General of the Asian African Legal Consultative Committee. He was Chairman of the UN of Experts on Legal Aspects of the New International Economic Order. He has represented Sri Lanka at the several annual sessions of the United Nations General Assembly and international legal conference, including the United Nations Conference on the Law of the Sea, and has been Legal Advisor in the negotiation of bilateral agreements on boundary demarcation, extradition, investment protection, shipping and aviation. He has taught international law and international relations at Sri Lanka University and the Post-Graduate Institute of International Relations.

Sun Lin is presently the Director of the Environmental Law and Institution Programme Activity Centre at UNEP's Headquarters in Nairobi. He received his Ph.D. in International Studies from the Beijing Institute for International Studies in 1975 and has worked in a number of capacities as diplomat and legal advisor to the Chinese Government in the field of International Environment Law, including the role of Chief Negotiator and Head of the Chinese Delegation during the sessions of the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change 1991-1992. Professor Lin's teaching career as a Professor of International Law and Relations started in 1988 and he is currently on a leave of absence while in Nairobi.

Maria Marotta received her Ph.D. in Environmental law. Since June 1991 she has been working in the Oceans and Coastal Areas Programme Activity Centre of UNEP, Nairobi as the officer responsible for the legal aspects of the Regional Seas Programme of UNEP, first as Junior Programme officer and presently as Programme Officer. Her academic background is in Political Science and International and European Communities Law. She has previously worked in legal research training, NGO and as a consultant in the field of environmental policy and law. She has published in areas of national, EEC and international law and related to UNEP's Regional Seas Programme in journals and Yearbooks (such as, the Ocean Yearbook and Yearbook of International Environmental Law).

John Patrick William Buchanan McAuslan received BA (Hons. Jurisprudence) in 1960, BCL (1961) Oxon and Barrister at Law (Middle Temple) 1961. Currently Professor of Urban Management with special reference to Land. University College London and also Professor of law, Birkbeck College, London. Professor McAuslan has been a Lecturer and Professor at numerous universities at home and abroad as well as a Consultant to UNCHS (Habitat), UNEP, ODA on legal and policy issues relating to land management and an adviser on land management. This entailed commissioning and assessing reports and papers from consultants, preparing policy papers; developing future programmes; advising governments on their urban land management practices and policies.

Stephen McCaffrey received his Juris Doctor from the University of California, Berkeley, in 1971, and his doctorate in law from the University of Cologne in 1974. He has served on law faculties since 1974, and has been Professor of Law at the University of the Pacific, McGeorge School of law in Sacramento California since 1977. He teaches and writes in the fields of public and private international law and international environmental law. He was a member of the International Law Commission of the United Nations from 1982-1991. He served as its chair in 1987-88, and as Special Rapporteur for the Commission's draft articles on the law of the Non-Navigational Uses of International Watercourses, which were adopted on first reading in 1991. He served as Counsellor on International Law in the U.S. Department of State in 1984-1985 and has been a member of a number of experts groups of international commissions and organizations. He is the author of numerous books and articles.

Masa Nagai is a Programme Officer, Environmental Law and Institution Programme Activity Centre and responsible for the development and implementation of international legal instruments, in particular on harmful chemicals. His present work includes the development of a legally binding instrument on the prior informed consent procedure as contained in the amended London Guidelines, development of legislative guidance documents on the management of chemicals, and the preparation of a code of ethics on the international trade in chemicals. He is a focal point to the Secretariat of the Basel Convention.

Bondi Ogolla obtained his Ph.D. from the University of Bordeaux in 1991. He also holds LL.B. (1978) and LL.M. (1980) Degree from the University of Nairobi. Before joining UNEP in 1992 he was a Senior Lecturer of Public Law at the University of Nairobi. He has taught environmental law to post-graduate students since 1985 and has published several articles in reputed international journals on the subject. He is a member of the IUCN Commission on Environmental Law, the International Council of Environmental Law, and the African Association for Environmental law and policy. (In ELI/PAC he is charge with the co-operation of technical assistance to developing countries.

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Mikko Phyhala received his LicSocSc from the University of Jyväskylä, Finland, in 1984. His three academic dissertations are all on development issues. He was in the Foreign Service Finland from 1973 until 1990 when he took leave to join UNEP. He has served in the Finnish Embassy in Czechoslovakia as attache, and as Deputy Chief of Mission in Mexico, India, and Italy. He has written several books. He is co-author of "Amazonia" which received the award of the best non-fiction book published in Finland in 1991. At UNEP, he has been Chief of the Clearing-house for Technical Cooperation, and concurrently Chief, GEF Unit and has coordinated UNEP's contribution to the Global Environment Facility.

Kirsten Rohrmann received her Candidatus Juridicus from the University of Copenhagen in 1984 and her Diplome en Droit International Public et Prive from L'Institut Universitaire de Hautes Etudes Internationales in Geneva, in 1988. She is currently a Programme Office in UNEP's Environmental Law and Institutions Programme Activity Centre in the Education, Training and information Unit. She has been employed with UNEP since 1990 and has until 1993 mainly been dealing with the negotiations for and the follow-up to the Convention on Biological. Prior to her employment in UNEP she was a programme officer with the Danish International Development Agency and worked as a Technical Director in a major international insurance brokerage.

Peter Schroder is presently the Director of oceans and coastal areas programme activity centre (OCA/PAC) which includes thirteen regions world-wide and well over 140 coastal states and territories participating. Before joining UNEP, Mr. Schroder was working with the Harbours, Coasts and Offshore technical Division of Delft Hydraulics as Manager of sea-level rise impact assessments, coastal zone management, evaluation of island resources and global evaluation of coastal vulnerability to sea-level rise projects, among others. His academic degrees are in marine sciences and economics.

Alexander Timoshenko received his Ph.D in international law in 1973 and the advanced degree of the Doctor of Legal Sciences in 1986 at USSR Academy of Sciences in Moscow. His career includes work at USSR foreign Trade Ministry and Foreign Affairs Ministry. Before joining UNEP in 1991 he spent 20 years in the USSR Academy of Sciences with his last position of the Director, Environmental law Department. While being at the academy he did individual research, lead research teams, consulted governments and legislature, participated as a governmental expert in negotiations of various international legal instruments in environmental field. He published two books and over 70 articles and essays on international law, international environmental law and environmental law. He is a member of several international law associations and societies. He is the Chief of International Legal Instruments Unit, charge with the responsibility of formulating legal instruments, the latest he worked in being the Biodiversity Convention.