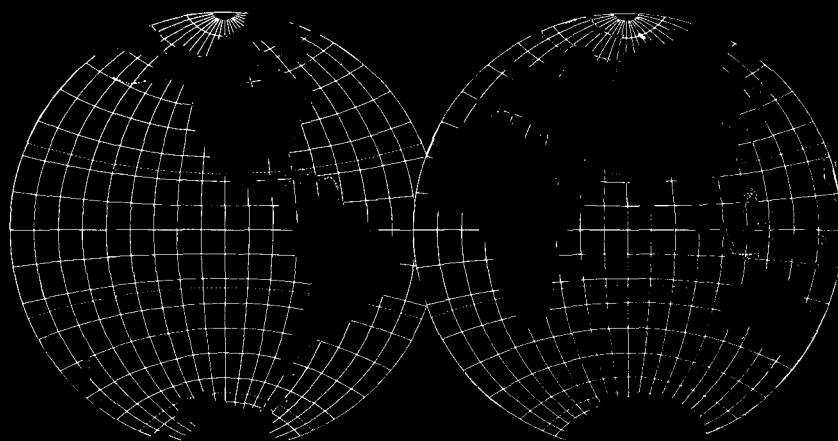


UNA
CONF.151
(063.5)
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Vol. I
Eng.
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Volume I

A/Conf.151/N.2 (Vol.1)
ENGLISH

Nations of the Earth Report



*United Nations Conference
on Environment and Development:
National Reports Summaries*



United Nations

UNA/conf. 15/1663 > /
Vol. 1

Volume 1

Nations of the Earth Report

*United Nations Conference
on Environment and Development:
National Reports Summaries*



United Nations



IN OUR HANDS

UNCED
Geneva 1992

This publication is also issued by set of *three* volumes under Sales No. E.93.I.25 (V.1)

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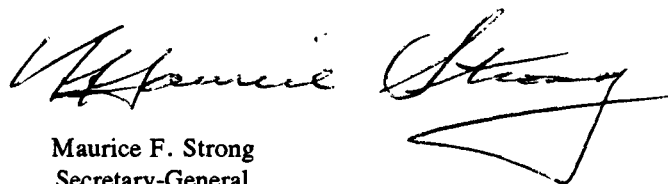
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Foreword

This book contains summaries of the national reports prepared for the United Nations Conference on Environment and Development, the Earth Summit held in Rio de Janeiro, June 1992. These summaries are not official, but are intended to assist the reader in identifying various issues highlighted in the national reports.

I would like to take this opportunity to express my gratitude to the UNCED Secretariat, in particular to the following staff members who have worked on the preparation of this book: Mr. Lars Hyttinen, who directed this undertaking, as well as his team of analysts and support staff, Beatrice Bulwa, Alicia Cantero-Cerezo, Aniket Ghai, Keith Maxwell Harris, Carole Ray and Azza Talaab. I would also like to acknowledge the assistance given by André Beaulieu, David Dunkley, Elizabeth Garfunkel and Kimmo Juvas.

Finally, special thanks go to the Government of Finland and to ECOFUND '92 for providing financial support for the analysis process.

A handwritten signature in black ink, appearing to read 'Maurice Strong', with a large, stylized flourish at the end.

Maurice F. Strong
Secretary-General
United Nations Conference
on Environment and Development

Explanatory note

United Nations General Assembly resolution 44/228 of 22 December 1989 decided to hold a United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in June 1992. As part of the preparations for the conference, governments were asked to prepare National Reports presenting their perspectives and experience, together with information on policies, activities and issues at the national level. Detailed suggested guidelines were approved at the First Preparatory Committee meeting in Nairobi during August 1990. These guidelines are reflected in document A/CONF.151/PC/8 and Add. 1 included in this book. The suggested deadline for the reports was July 1991, later extended to mid-November 1991.

Only 15 reports were received by the end of July 1991 and by mid-November the number had risen to 72. These reports total some 11,000 pages (without annexes), with approximately two thirds in English and one third in other languages, primarily in French and Spanish. At the time of the Fourth Preparatory Committee meeting in March 1992 in New York some 130 reports had been received and still more were expected. An "Overview of National Reports" was presented to the Fourth Preparatory Committee session in New York as document A/CONF.151/PC/98 dated 12 February 1992.

This book is intended as a "Quick-reference Compendium" of the national reports. Due to limited resources and the large number of late reports, summaries of only 47 reports have been included in this volume. The reports in this volume were selected on the basis of early submission, preference being accorded to final over draft versions. A separate companion volume is planned for issuance later during 1992.

The purpose of this book is to give the reader an idea of the main elements and concerns raised in the various national reports. The brief summaries are not official, nor do they necessarily reflect the full and accurate positions of the governments concerned. They are merely indications of the contents of the reports and the reader should refer to the full report of the country/countries in question for detailed and accurate information. The summaries have been compiled by a team of analysts from the UNCED Secretariat extracting information under the following main headings which were of particular interest to UNCED.

1. Drafting process
2. Problem areas
3. Past and present capacity building initiatives
4. Recommendations and priorities on environment and development
5. Financial arrangements and funding requirements
6. Environmentally sound technologies
7. International cooperation
8. Expectations from UNCED

The summaries also contain the Table of Contents for each report, under section 9.

The Secretariat has endeavoured to make the summaries as succinct and clear as possible. In some cases reports have been translated by the governments concerned into English, and sometimes the analysts have interpreted the original text in preparing the summaries. Besides English, reports have been received in French, Spanish, Arabic and Russian. Reports received in a non-UN language have not been analyzed. Shortage of time and resources has not permitted full verification of accuracy of translated reports. It should be borne in mind that sometimes new terminology is created in addressing sustainable development subjects. The summaries therefore often use direct quotations rather than trying to condense or interpret the text.

Lars Hyttinen
Director, National & Regional Activities

21 April 1992

ALGERIA

Full Title: RAPPORT NATIONAL: Conférence Mondiale sur l'environnement et le développement
Date of Report: June 1991
Version: Final
Original Language: French
Other Language(s): -
Total Pages: 59
National Contact Address: -

UNDP Contact Address: UNDP Resident Representative
 B.P. 823
 Algiers 16000, Algeria
 Tel: (213-2) 74 49 02
 Fax: (213-2) 74 50 82

1. DRAFTING PROCESS

National Committee: Editors & Authors:

No mention

Other Ministries and Government Agencies:

No mention

NGOs, Grassroots Organizations and Public Involvement:

No mention

2. PROBLEM AREAS

- Irregular rainfall necessitates considerable artificial mobilization of water resources. Analyses show that between the years 2010 and 2025, Algeria will start experiencing serious water shortages;
- Fragile soils, the indispensable support for any agricultural or pastoral activities, require protection or artificial production of soil;
- The big differences in temperature and the very hot summers require agricultural and pastoral systems, as well as housing, to be very adaptable;
- Expansion of the desert towards the north of the country results in:
 - the reduction of feed crops;
 - difficulties in breeding cattle;
 - sand deposits from the desert affecting agricultural land, towns and roads;

2 Algeria

- Waste management;
- Population growth and its related problems such as housing and unemployment;
- Water purification techniques are not yet up to standard and poor drinking water is the cause of numerous diseases in the country and high rates of infant mortality.

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

Forestry:

- Installation of equipment and establishment of a national network of prevention, detection, and emergency response to forest fires;
- Means for treatment of forests suffering from parasites and other diseases (more than 627,000 hectares of forest have been treated to date);
- A national monitoring system for forest surveillance is to be introduced and the infrastructure to be extended so as to enable better access into forests;
- Various legal texts, the most important being a general bill on forests;
- Creation of a national commission to combat forest fires. Similar commissions exist at the level of "wilayas" (territorial divisions);
- Operation "Barrage vert", established in 1971 to combat desertification, mainly consists of afforestation (p 13).

Fauna and flora:

- Creation of protected zones (national parks and hunting reserves).

Water resources:

- A law on the monitoring programme of water resources is about to be promulgated. Its objective will be to render compulsory the regular establishment and updating of a register of surface and underground water pollution (p 21).

Marine resources:

- To combat marine pollution a number of coastal towns have been equipped with purification stations to treat urban waste (p 23);
- The four oil ports have installations for receiving ballast waters as well as equipment for recuperating or treating hydrocarbons accidentally released into the sea (p 24). Unfortunately all this equipment is not up to standard and needs refurbishment;
- The following legislation on marine protection is in effect:
 - the law concerning protection of the environment;
 - the maritime code;
 - the decree regulating activities of aircraft and ships (p 24).

Industry:

- The Minister for the Environment has ordered some 60 industrial units to rehabilitate or repair their anti-pollution installations;
- The following legislative measures have been taken:
 - a decree regarding environmental impact studies for all new industrial projects (February 1990);
 - a decree defining the regulations applicable to installations classified as "dangerous for the environment" (July 1988) (p 29).

Toxic wastes:

- Certain producers of cyanide wastes launched a research programme aiming at substituting neutral salts for cyanide salts in the manufacturing process. The success of this experiment has led to its extension to other companies (p 33).

Waste management:

- A 1983 decree sets the conditions for collecting, sorting, transporting, treating and eliminating urban wastes;
- Since 1986, PCB wastes have been regulated by a decree which prohibits purchase, transfer and use. This decree also sets the conditions by which they must henceforth be maintained, manipulated, transported and stocked if they are already on the national market (p 34);
- Construction plans for a plant for the recycling of used oils is being examined.

Soil erosion:

- To combat soil erosion, the authorities hope to embark on programmes, in the form of projects, which closely involve local populations.

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

A number of programmes have been selected:

- Extension and protection of the vegetative cover through the establishment of a national forestry register, afforestation and creation and safeguard of a vegetative and animal genetics fund (p 47);
- Conservation of nature through the protection of natural resources and creation of four new protected zones;
- As regards desertification, the following areas have been identified:
 - establishment of a national map of areas prone to desertification;
 - extension of the "barrage vert" programme to the semi-arid zones (between 100 and 200 mm of rainfall);

4 Algeria

- continuation of afforestation while encouraging diversification;
- limit movements of sand dunes by restoring vegetative cover;
- opening of the steppe area through an appropriate network of infrastructure (p 48);
- As regards pollution, it has been recommended to prepare a national map, based on an evaluation programme on the state of environment in the country. General care of impacts assessments and non-polluting technologies are encouraged. Marine, industrial, urban and water pollution is to be treated separately;
- A programme on wastes aims at the transformation of 10% of household wastes into manure, the recycling of at least 50% of used oils, the recycling of about 20% of plastic wastes and the recuperation and recycling of at least 50% of ferrous and non-ferrous metals, textile wastes and paper wastes;
- A national map of areas prone to erosion is to be established;
- Establishment of an ecological map of Algeria consisting of an inventory of all the natural resources in the country, including vegetation, soils, water resources, protected zones, landscapes, humid zones and historical monuments and sites.

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

Funding is required for the construction of a national centre to store PCB wastes (p 33).

The technique of controlled rubbish dumps was introduced in some big towns. Financial limitation and lack of state subsidies have, however, prevented wider use of the technique.

Concerning protection of the atmosphere and the ozone layer, Algeria will solicit, in the same way as the other developing countries, financial aid and technical assistance (p 55).

Algeria will need considerable financial assistance for the implementation of the various environmental programmes (p 58).

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

Algeria hopes to get financial and technical assistance from industrialized countries to continue existing efforts to replace CFC propellants with environmentally friendly substitutes (p 55).

7. INTERNATIONAL COOPERATION

No mention

8. EXPECTATIONS FROM UNCED

UNCED should enable industrialized countries, through the examination of issues relating to substantial and additional financial resources and the transfer of technology at favourable conditions, to give proof of

their political will to translate into reality, the emergence of "our common future". Algeria is determined to make its contribution by assuming its share of responsibility in this undertaking to which there are no other alternatives (p 59).

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ARGENTINA

Full Title: Informe Nacional a la Conferencia Sobre Medio Ambiente y Desarrollo de las Naciones Unidas

Date of Report: July 1991

Version: Final

Original Language: Spanish

Other Language(s): -

Total Pages: 582 plus 26 page annex on Women and Environment
Also 34 page Executive Summary

National Contact Address: Secretaria General, Comisión Nacional de Política Ambiental, Presidencia de la Nación, Buenos Aires

UNDP Contact Address: UNDP Resident Representative
Casilla de Correo 2257
1000 Capital Federal, Buenos Aires
Tel: (54-1) 3943669 Fax: (54-1) 111516

1. DRAFTING PROCESS

National Committee: Editors & Authors:

National committee on environment policy attached to the general secretariat of the President's office

Other Ministries and Government Agencies:

Federal Council on the environment

NGOs, Grassroots Organizations and Public Involvement:

No mention

2. PROBLEM AREAS

- Increasing levels of acid rains in the cities of Buenos Aires and La Plata according to the Centre on Biometeorological Investigation;
- Chemical pollution leading to the depletion of the ozone layer;
- Soil degradation and erosion due to intensive agriculture, overgrazing, deforestation, deliberate or accidental forest fires, drainage problems or due to salinity;
- Marine pollution like that of coasts, la Plata and Bahía Blanca rivers as well as the beaches of the Mar del Plata city through organic pesticides, hydrocarbons and heavy metal;
- Natural disasters like floods and mudslides which damage the best lands like Chaco plains and affect human health;

- Deteriorating forests due to lack of information on the dynamics of this resource, lack of taxation on the irrational use of forests as well as an insufficient awareness of the benefits of the importance of forests;
- Pollution of air, water, and soil due to overused ecosystems, rising urbanization, lack of control on the emission of gases by both industries and motor vehicles and finally lack of a system for the treatment of waste waters. Moreover, pollution of vital food processes is seen due to toxic chemical products and soil acidification;
- Insufficient networks for the observation of the total quantities of ozone as well as of those for monitoring ultra-violet radiation;
- Global warming due to increasing levels of greenhouse gases;
- Rising desertification with diminishing biological diversity;
- Acidification of lakes and waterways besides eutrophication of lake areas;
- Rising poverty;
- Insufficient use of unconventional sources of energy.

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

- Programme for arid lands with the Agro-Technology and Soils Institute being in charge of soil and water conservation;
- A natural germplasm programme has been launched in addition to Santa Catalina Institute which had been set up for the conservation of maize germplasm and other banks like the one set up on groundnuts;
- A bill is currently under preparation to set up a national system of protected areas so as to ensure federal coordination in the field of conservation of nature and protected areas. Developing data banks is also encouraged;
- There is no single environmental law but numerous laws abound, for example, Law No. 20284: "Norms for air protection" the aim of which is to ensure air quality for human health; Ordinance No. 39025 of 1974 of the municipality of Buenos Aires which aims at preventing environmental pollution through fixing norms on different urban polluting activities. There are programmes to attain sustainable development in addition to others set up to formulate the most appropriate methods to address forests.

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

- Provide adequate services on soil conservation to producers through extension services;
- Rational use of forests in addition to improving the living standards of their inhabitants besides striving to conserve genetic forest resources;
- Facilitate the importation of technologies adapted to our ecosystem;
- Encourage a reduced consumption of hydrocarbons as well as the rational use of energy;

- Need for the conclusion of a regional agreement on fishing limits, south of the Atlantic;
- International programmes and projects should take due account of the urban poverty dimension together with its interrelationship with environmental degradation;
- Encourage transfer of technology and know-how between developed and developing countries;
- Need for the insertion of environmental considerations in school curricula;
- Proposing the setting up of "an external debt fund for sustainable development" with a view to using released funds in launching beneficial studies and projects;
- Need to undertake studies on the role to be played by NGO's as a forum of urban expression as well as on the need to increase popular participation;
- Provisions on the protection of the environment are to be inserted in the Argentine Penal Code;
- More international cooperation with a view to adopting environmentally clean technologies in developing countries;
- Countries with nuclear arsenals are advised to reduce their military expenses so as to use funds thus released for the resolving of environmental problems;
- Industrialized countries are encouraged to review their commercial policies so as to avert trade barriers with Argentina and other developing countries. Current policies have a negative impact on both development and environmental degradation;
- Increase efforts to use more renewable sources of energy in addition to launching more studies on alternative sources of energy like solar, geothermal or tidal energy.

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

- Additional funds to indebted developing countries are needed through an international fund for the environment to be financed possibly by the World Bank and the UNDP;
- Need expressed for more international funds for setting up environmental control and monitoring systems at a national level;
- Need for more technical cooperation so as to implement educational projects.

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

- In the last twenty years hydroelectric power, which is environmentally clean, has increasingly been used;
- Trend towards substituting the use of petrol by natural gas; a factor which helps in reducing air pollution;
- Resorting to unconventional sources of energy like solar, wind, geothermal, and tidal energy, as well as biomass;

7. INTERNATIONAL COOPERATION

- The Tlatelolco platform on environment and development was elaborated at a ministerial regional meeting for Latin America and the Caribbean in 1991, the purpose of which is to deal with different environmental issues like the protection of the atmosphere and biodiversity, soil degradation, forests, the issue of eradicating poverty and the environmental management of toxic and dangerous wastes;
- Argentina is currently undertaking efforts towards establishing an international system of protected areas, in collaboration with neighbouring countries;
- Setting up an inventory of national forests with the help of the World Bank and other institutions;
- Setting up a germplasm bank in collaboration with Canada;
- Participatory forestry with the assistance of the Netherlands;
- Regional and international cooperation in the rehabilitation of degraded areas besides the setting up of a Latin American network for arid and semi-arid areas organized by the FAO's regional office;
- Participating in different UN agencies such as UNESCO, FAO, UNIDO, IAEA, WHO and UNEP so as to examine environment- related issues be they in agriculture, industry, nuclear energy, education and health;
- Participating in regional organizations to set up programmes on the biosphere and the geosphere, in addition to strengthening collaboration with Brazil, Chile and Uruguay with a view to formulating regional conventions on the environment, in particular on the need to combat water pollution.

8. EXPECTATIONS FROM UNCED

- More coordinated efforts towards attaining sustainable development;
- Increased support is requested from developed countries in the field of technical and financial assistance with a view to combatting environmental degradation;
- Expectations set upon the positive outcome of the preparatory process so as to increase public awareness of the importance of a healthy environment.

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7. Drafting the National Report

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BARBADOS

<i>Full Title:</i>	Barbados National report to UNCED 1992
<i>Date of Report:</i>	August 1991
<i>Version:</i>	Final
<i>Original Language:</i>	English
<i>Other Language(s):</i>	-
<i>Total Pages:</i>	157
<i>National Contact Address:</i>	Ministry of Labour, Consumer Affairs and the Environment, Bridgetown, Barbados
 <i>UNDP Contact Address:</i>	 UNDP Resident Representative P.O. Box 625 C Bridgetown, Barbados Tel: (809) 429 25 21/2 Fax: (809) 429 24 48

1. DRAFTING PROCESS

National Committee: Editors & Authors:

The report was prepared by the Environment Unit of the Ministry of Labour, Consumer Affairs and the Environment. A Core Group was established to assist with the preparations for UNCED. The foreword was signed by Mr. Warwick O. Franklin, M.P., Minister of Labour, Consumer Affairs and the Environment. The acknowledgements were signed by the Permanent Secretary, Ministry of Labour, Consumer Affairs and the Environment.

Other Ministries and Government Agencies:

Participating agencies in the national report preparation were:

- Finance and Planning;
- Central Bank of Barbados;
- South and West Coasts Sewerage Project.

NGOs, Grassroots Organizations and Public Involvement:

The Core Group included two academicians, two individuals from the private sector and a representative of the Caribbean Conservation Association, a Regional NGO.

A National Preparatory Workshop was organized by the Environmental Unit in February 1991. It attracted over 150 persons including representatives from the private sector, NGOs, environmental and development agencies, professional organizations, the University, and workers' and employers' organizations. The conclusions of the workshop were included in the report.

The final draft report was submitted to the Cabinet for its consideration and approval.

2. PROBLEM AREAS

- Inadequate financial resources, hence an increasing external debt (pp 4 & 90);
- Institutional inadequacies: for example, since 1981, five Ministries have had the responsibility for environmental matters. This constant shifting has had an adverse impact on the country's ability to manage effectively its environmental resource base;
- Inadequacy of existing legislation and a lack of proper enforcement mechanisms (p 93);
- Inadequate data bases as well as inadequate monitoring and evaluation of resources (pp 95-98);
- Lack of public awareness (pp 98-99);
- Lack of trained personnel (pp 99-101);
- Growing unemployment (15.5 % in 1989);
- Decline in agricultural output as a share of GDP;
- Decline in agricultural employment, especially in sugar cane due to:
 - reduced demand generated by falling acreage and reduction in number of sugar cane processing plants;
 - contraction in supply caused by competition from other sectors, especially tourism, which offer relatively more attractive conditions of work;
 - growing indebtedness of estates (pp 27-29).

Environmental issues (pp 37-58)

National issues:

- land management, utilization and planning;
- solid and liquid waste disposal and management;
- soil erosion;
- coastal erosion;
- water utilization and management;
- natural hazards.

Regional issues:

- pollution of the Caribbean Sea;
- over-exploitation of the Caribbean Sea resources.

Global issues:

- climate change;
- transboundary movement of hazardous wastes and radioactive material;
- transboundary air pollution.

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

- Human settlement is regulated under the "Barbados Physical Development Plan";
- A National Consultation on the Environment was convened in August 1987;
- The Government of Barbados has embarked on the formulation of a National Conservation Strategy;
- The Pesticides Control Board, formed in 1983, issues licenses for the importation of pesticides;
- The National Conservation Commission was established in 1982, and is an amalgamation of the Parks & Beaches Commission and the Caves Authority;
- Activities of the Coastal Conservation Project Unit include coastal monitoring and the design and construction of sea defence works;
- The concerns of the Environmental Unit (established in 1987 after the dissolution of the Ministry of Tourism and the Environment) cover environmental policy, environmental impact assessment, legislation, public awareness, research and planning;
- Bridgetown, West and South Coasts Sewerage Project administers the feasibility studies for the construction of sewerage systems;
- The Sanitation Services Authority removes refuse and maintains public places;
- A number of committees have been set up to address specific environmental-developmental issues, including: the Inter-Institutional Working Group on the Environment; the Risk Analysis and Monitoring Committee for Industrial Development; the National Committee on Occupational Safety and Health and the National Environmental Education Committee;
- Legislation on the environment exists on the following areas: wildlife and protected areas; coastal zones and marine resources; land use and planning; natural resources; health services; hazardous substances; solid waste management; occupational health and safety; noise and litter. Work is currently under way to rationalize the existing legislation, to eliminate duplication and to cover areas that are omitted;
- A coastal conservation project is ongoing in conjunction with the Inter-American Development Bank (IADB);
- The Barbados Marine Reserve has been set up, together with a museum, which will eventually be transformed into a modern Marine and Coastal Interpretation Centre;
- The Bridgetown Sewerage System, established in 1982, provides a collection system, an activated sludge treatment plant and a marine fall-out 1,000 feet from the shore;
- The Pulverization Plant for solid waste management in St. George was opened in 1980;
- The Pesticides and Trace Chemical Analysis Project was initiated in 1987 under the aegis of the National Council for Science and Technology;

- The Government has an environmental education and public awareness programme under way, targeting schools, women's and community groups, labour unions, managers of companies and private sector organizations;
- The Centre for Resource Management and Environmental Studies of the University of the West Indies was set up in 1986 to provide formal training in environmental studies.

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

- The compilation of an adequate resource data base of terrestrial, coastal and ocean resources;
- The institutionalization of a macro framework, including: the improvement of the National Accounting System to include for the environment in income estimation; establishment of mandatory environmental impact assessment for development projects; the establishment of a comprehensive system of environmental legislation and the use of economic instruments to achieve sustainable development goals;
- Improve utilization and management of marine resources in the Exclusive Economic Zone, establish additional marine protected areas, reduce land-based sources of marine pollution, monitor the impacts of climate change on coastal dynamics, adopt measures for the prevention of pollution from ships and establish mechanisms to monitor marine pollution;
- Evaluate existing water zones and impacts of development activities, establish procedures to respond to and monitor the impacts of man-induced hazards, increase investments in water resource infrastructure and strengthen monitoring capabilities;
- Restore land resources that have been degraded or depleted, strengthen security against natural and man-made disasters and develop unused land resources in a profitable and sustainable way;
- Develop environmentally sound methods of waste disposal, reduce solid waste through improved packaging, construct sewerage facilities along south and west coasts and strengthen monitoring, collection and analysis of data;
- Introduce environmental studies as an integral part of the education system;
- Establish mechanisms to strengthen cooperation at the regional level (e.g. Action Plan for Latin America and the Caribbean, Regional Seas Programme) and sub-regional level (e.g. CARICOM).

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

- The Inter-American Development Bank (IADB), is/has financing/financed a number of projects including the coastal conservation project for Barbados, a pre-investment coastal protection project valued at approximately US\$7.3 million, the Bridgewater Sewerage System, as well as the south and west coasts sewerage systems (pp 72-75);

- Despite a per capita income of over US\$6,000, it cannot be argued that Barbados has the resources to adjust to global environmental issues, to address environmental issues at the national and regional levels, or to reorient its economy to sustainable development. The continued use of the per capita criterion will put countries like Barbados at a great disadvantage and will only succeed in reinforcing unsustainability (p 144).

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

- The country's energy resources also include bagasse, wind, solar and wave energy (p 18);
- To encourage utilization of solar energy, tax concessions are granted for the purchase of domestic solar heating units. Manufacturers of the solar water heating units also benefit from fiscal advantages which allow them import preferences. Furthermore, in industry, a 30% consumption tax has been placed on imported gas and electric water heaters. These concessions, however, are dictated by economic reasons (p 102).

7. INTERNATIONAL COOPERATION

Regional level:

- Barbados participates in the activities of the Caribbean Environment Programme, which is part of UNEP's Regional Seas Programme. At present, Barbados occupies the position of first vice president for the Programme, 1990-1992.

Sub-regional level:

- Barbados has participated actively in the initiatives coordinated by the Caribbean Community and Common Market (CARICOM) Secretariat, including both the first and second CARICOM Ministerial Conferences on the Environment convened in 1989. It is also represented on the CARICOM Forum on the Environment and on the Regional Task Force preparing the region for UNCED;
- Barbados is an active member of the Caribbean Conservation Association, an NGO dedicated to the preservation and conservation of the Caribbean environment.

Global level:

- Has participated actively in the various UN system organizations which carry environmental responsibilities, including:
 - the World Meteorological Organization (WMO);
 - the International Maritime Organization (IMO);
 - the Food and Agricultural Organization (FAO);
 - the United Nations Environment Programme (UNEP);
- Barbados is a member of the Bureau of the Preparatory Committee for UNCED, occupying one of the 39 Vice Presidency positions;
- Within the context of the Framework Convention on Climate Change, Barbados is playing an important role in the Alliance of Small Island States (AOSIS), which was formed to ensure that the interests and fundamental rights of small island states are protected within the Framework Convention.

8. EXPECTATIONS FROM UNCED

(pages 146-153)

Earth Charter:

- Should be renamed to reflect the integration of environment and development;
- Should be short and concise, clearly outlining the responsibility of all States;
- Principles should be built upon the Stockholm Declaration and the United Nations General Assembly resolution 44/228.

Agenda 21:

Points to be considered:

- Should be based on the Earth Charter on Environment and Development;
- Clear definition of objectives, costs and finances for implementation of decisions;
- New and additional financial resources;
- Access to environmentally sound technologies on concessional and preferential terms;
- Inclusion of a section addressing the specific needs of small islands.

Financial resources:

- New and additional resources to fund environmental actions and strengthen existing mechanisms;
- No conditionality in transfer of resources;
- Mandatory contributions supplemented by voluntary contributions;
- Per capita GNP should not be used as the criterion for accessing new and additional resources.

Technology:

- While environmentally sound technologies should be accessed on concessional and preferential terms, all countries should be supported in creating and developing endogenous technological capacities.

Institutions:

- Strengthening of existing institutions;
- Establishment of a mechanism to monitor the implementation of Agenda 21.

Essential elements of the Framework Convention on Climate Change:

- Immediate and significant cuts in emissions of carbon and other greenhouse gases;
- Preventive approach calling for immediate action;
- New, additional and equitable funding mechanisms for low-lying, coastal and small vulnerable island states;
- Transfer of environmentally sound technologies;
- Polluter-pays principle;
- Energy conservation and development of alternative energy sources.

Other points to be considered:

- Change of consumption patterns in the North;
- Eradication of poverty.

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BELIZE

Full Title: The Belize National Report to the Conference on Environment and Development
Date of Report: 1991
Version: Final
Original Language: English
Other Language(s): -
Total Pages: 89
National Contact Address:

UNDP Contact Address: UNDP Resident Representative
 P.O. Box 1114
 San Salvador, El Salvador
 Tel: (503) 23 44 66
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1. DRAFTING PROCESS

National Committee: Editors & Authors:

The authors of the report are not mentioned

Other Ministries and Government Agencies:

Officials from the following Ministries and agencies contributed to the preparation of the report:

- Ministry of Tourism and the Environment
- Ministry of Home Affairs and Defence
- Ministry of Energy and Communications
- Ministry of Natural Resources
- Ministry of Education
- Ministry of Agriculture and Fisheries
- Ministry of Social Services and Community Development
- Ministry of Housing and Cooperatives
- Ministry of Economic Development
- Department of Women's Affairs
- Office of Geology and Petroleum
- Belize Tropical Forest Action Plan
- Overseas Development Administration
- Belize Electricity Board
- Belize Enterprise for Sustainable Technology

NGOs, Grassroots Organizations and Public Involvement:

Other contributors came from the following interest groups:

- Belize Audubon Society
- Programme for Displaced Persons, Refugees and Repatriates (PRODERE)

- Belize Rural Women's Association
- Programme for Belize
- Belize Tourism Industry Association
- Belize Center for Environmental Studies
- The Nature Conservancy
- CARE International, Belize
- United States Agency for International Development

2. PROBLEM AREAS

- The lack of government capacity is exacerbated by the small size of Belize's population and economy which places limits on the numbers of staff and the size of budgets which can be devoted to managing efficiently and effectively the environment. The government has difficulty in retaining qualified personnel, owing to significantly better salaries in the private sector and abroad;
- The poor implementation of legislation on natural resources protection is a consequence of the lack of staff and lack of procedural standards;
- The lack of scientific knowledge related to the workings of the Belizean ecosystems continues to plague the government in its ability to develop appropriate standards to accompany the laws it has made. The government still does not have a complete knowledge of its national territory;
- Lack of baseline data from which to monitor trends in the environment, thus government's inability to design appropriate environmental standards, and to promulgate the appropriate regulations that would give teeth to the existing laws. This issue ties back to the two points above: government's inability to enforce its laws and lack of technical capacity;
- Financial, administrative and knowledge barriers prevent enactment of policies for land use planning and coordination, from an environmentally sound perspective;
- The bulk of Belize's population and economic heart is still on the low-lying coast. Should sea levels rise and storms become more frequent and intense, the effect on Belize will be devastating. A sea level rise of more than one centimeter per year will outpace the potential growth of the coral reef, causing parts of it to drown (concern for global warming);
- Deforestation caused by agricultural expansion;
- Dependency on foreign markets (p 20);
- Unemployment particularly affecting urban youth and rural women;
- Relative population growth caused by influx of Central American refugees, who live under unsanitary health conditions and exert increased pressure on the land, either through farming or through the creation of settlements (p 58);
- Non-existence of a modern road network to fully link up the entire country, and rural roads are few and of generally poor quality;

- Increase in external public debt; external terms of trade are expected to decline by 11% between 1989 and 1994;
- Inadequate management of waste, and toxic and hazardous substances;
- Environmental priorities considered in conjunction with its Caribbean neighbours:
 - housing and urban settlements;
 - degradation of the coastal and marine environment;
 - prevention and mitigation of the effects of spills;
 - solid and liquid waste management;
 - management of toxic and hazardous substances including the control of agro-chemical residues;
 - dumping of extra-regional hazardous and toxic wastes in the region;
 - water quality and supply;
 - forest and watershed management;
 - preservation of genetic resources;
 - disease vector control and disaster planning.

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

Following the 1986 Nairobi Conference's Forward Looking Strategy, a Bureau of Women's Affairs was created within the Ministry of Social Services. Progress has been made and there is now a Department of Women's Affairs, with its separate line item in the government budget and a staff of fifteen.

The Department of Environment, located in the Ministry of Environment and Tourism, maintains ties with the Cabinet and the Cabinet sub-committee on Environment. It also receives input directly from the international donors, local and foreign NGOs and industry groups. It has a symbiotic relationship with the key ministries whose work impacts the environment, for example by providing informal environmental assessments to the Ministry of Economic Development for its applications for development concessions. It also maintains an active liaison with the recently created National Economic Mobilization Council (NEMOC), a group of policy-makers and technicians charged with developing and implementing the National Development Plan of 1990-1994. Through a Physical Planning Sub-Committee, NEMOC deals with land use planning, environmental planning and management and providing environmental impact assessments for individual development projects.

To remedy the problem of being dependent on imported petroleum, the Belize Electricity Board is using joint public/private investment funds to construct a hydroelectric plant that will bring four major petroleum plants to 5% of their former capacity, eventually supplying a large portion of the country's demand for energy (pp 27-29).

By introducing a series of teaching manuals, the environment is being steadily integrated into the school curriculum as a separate and distinct unit. Although serious problems remain, environmental health impacts are beginning to be studied in greater detail.

Sugar cane processing generates much pollution from its wastes. UNIDO will establish an Industrial Pollution Control Monitoring Programme, train three government employees in industrial pollution control and shortly begin a programme to characterize completely the liquid waste streams into the New River.

Based on 1990 statistics, out of the 950,000 tons of sugar cane that were ground at the Belize Sugar Industry, 147,250 tons of bagasse were produced; 59.25% of the total bagasse was burnt as fuel to power the factory.

UNIDO is currently verifying a pre-feasibility study on the use of citrus waste as an economical source of fuel to replace the diesel generators that currently power the plants and supply energy to the surrounding communities. Under the proposed plan, solid wastes would be burned to power boilers, and the liquid wastes would be treated by anaerobic digestors, both eliminating production wastes and cutting dependence on imported petroleum (pp 29-32).

Plans have been made to improve the transportation system (pp 33-34).

A number of parks and natural reserves are covered under the Wildlife Protection Act and the National Parks System Act of 1981.

A number of other legal texts govern environment/development related sectors (e.g., Land Utilization Ordinance; Development Incentives Ordinance which gives the Ministry of Economic Development the authority to grant tax free development concessions to foreign and Belizean investors).

The Pesticides Control Act established the Pesticides Control Board to oversee the general activities and responsibilities for monitoring and regulating pesticide usage in Belize. There is a list of banned and restricted pesticides in Belize, but enforcement capacity is low, and the general population is not yet satisfactorily educated on the safe use of these chemicals.

A campaign of marijuana eradication is being carried out with the cooperation of the USA Drug Enforcement Agency.

Logging has always been done on a selective basis, only harvesting those species which are fetching the highest price at the time.

In 1988, the Government and an NGO, known as the Programme of Belize, signed a Memorandum of Agreement which incorporated the Programme and permitted the purchasing of some 100,000 acres of land to be held in trust for the Belizean people. Programme staff are currently drafting a management plan for this land, which will include forest management for timber harvesting, wildlife conservation, development of modest tourism facilities and ecological research.

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

- Strengthening of the Environment Health Programme (including at community and village levels);
- Review of such areas as:
 - monitoring and control of industrial and vehicular pollution;
 - use of pesticides and fertilizers;
 - institutional strengthening;
 - environmental education and information.
- Reform of health legislation and stronger law enforcement;
- Survey at village level of rural water supplies; health education activities relating to water and sewerage will be conducted;
- Better refuse collection and solid waste disposal;

- Strengthening of regional cooperation (CARICOM) to promote public education and awareness, training and development of human resources, information, research, legislation, etc.;
- Need for more international assistance;
- Commitment by the government to promote institutional development begun with the formation of NEMOC. Strengthening of NGOs' role as the bridge for people's participation in the environmental consultative process;

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

- In 1989, Belize received US\$ 29 million in official development assistance, amounting to 11 % of its GNP;
- USAID funded the Environmental Country Profile. USAID's mid 1980s 40% contribution of development assistance, has fallen to 20-25 % of the total without lowering their funding levels owing to the international community's increased interest in Belize;
- A consortium of donors funded the research and preparation of the Tropical Forest Action Plan for Belize, which is being used to promulgate regulations more in concert with Belize's capacity and needs;
- A comprehensive land use suitability study funded by the Food and Agriculture Organization is nearly completed, and will greatly assist the government as it attempts to better control its development with an eye towards long term sustainability;
- Future environmental projects are in the pipeline for international donor assistance;
- USAID is reviewing a project to strengthen the Ministries of Tourism and the Environment, Natural Resources and Agriculture and Fisheries to govern the sustainable use and exploitation of the environment.

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

- Belize is in the process of building its first hydro-electric plant, scheduled to start working in 1993;
- Use of the "Milpa" system whereby a small area of forest is clear-cut and planted for 3 years, after which productivity falls off and the land is abandoned and allowed to regenerate for between ten and twenty years (pp 43-44);
- Bagasse out of ground sugar cane is used as fuel, and steps are under way to convert citrus waste into fuel to replace the diesel generators that currently power the plants and the surrounding communities (p 30);
- Use of solar box cookers (p 83).

7. INTERNATIONAL COOPERATION

- See Financial Arrangements and Funding Requirements;
- Belize is involved in inter-regional efforts on many fronts with both the Central American states and the Caribbean Community (CARICOM), of which its is a member;
- On the Central American front, Belize is coordinating with the states of the "Mundo Maya" - those countries with Mayan remains which include Mexico, Guatemala, Honduras and El Salvador;
- Under the lead of Belize, the Mundo Maya is in the process of submitting a proposal for a comprehensive inter-regional environmental management plan to the Global Environmental Facility, a funding programme specifically dedicated to the environment, jointly administered by the World Bank, UNDP and UNEP;
- CARE International, The Nature Conservancy (TNC) and Conservation International (CI) are currently undertaking a regional project, known as the "Proyecto Ambiental para Centro America" (PACA), to promote the conservation and sustainable use of natural resources in Central America;
- TNC donated US\$ 2.5 million to assist the Programme for Belize in its purchase of the 100,000 acres Rio Bravo land parcel;
- Conservation International has worked with a local NGO to promote the use of solar box cookers;
- CARE has been working in conjunction with the Federation of Agricultural Cooperatives to increase domestic vegetable production. This project has an integrated pest management component.

8. EXPECTATIONS FROM UNCED

- Belize looks to the international community to assist it at the local, regional and global levels to address its concerns (financial, administrative and knowledge barriers, regional environmental priorities and protection of biodiversity);
- Belize looks forward to sharing with interested developing states at the Conference the model of its environmental policies and laws whose standards, as designed by a developing state, will be more appropriate for them than examples provided by the North;
- Belize looks forward to the Conference as an opportunity to see what other similarly well-intentioned countries without follow-through capacity have designed to surmount this common barrier;
- Belize hopes that the international community will recognize and support the actions that it and other developing countries have taken to promote and defend the natural environment.

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BENIN

Full Title: Document prepared for the United Nations Conference on Environment and Development (1992)
Date of Report: June 1991
Version: Final
Original Language: French
Other Language(s): English Translation
Total Pages: 119 (F), 94 (E)
National Contact Address: Unknown

UNDP Contact Address: UNDP Resident Representative
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1. DRAFTING PROCESS

National Committee: Editors & Authors:

No mention

Other Ministries and Government Agencies:

No mention

NGOs, Grassroots Organizations and Public Involvement:

No mention

2. PROBLEM AREAS

Housing (page 61)

- Housing problems - poor private housing, unhealthy housing sites, unsanitary conditions due to lack of hygiene. According to 1990 data, 50% of the households living in Cotonou are inundated at least once a year, and more than 10% live under permanently wet conditions. (p 28). Accelerated population growth, absence of urban and rural policies and a housing crisis associated with the economic recession have contributed to a decline in the standard of living in both the cities and the countryside.

Demographic Pressures (page 24 - 28)

- Risk of starvation for a fraction of the population, even though the country is structurally and generally capable of meeting its needs, due to uncertainty and variability of yields and the price of agricultural products, the decline of the standard of living in urban centres, demographic pressure and environmental degradation in certain areas, isolation of villages and progressive destruction of certain traditional safety nets;

- In view of the actual rhythm of population growth, the overall performance of Benin's economy is much lower than what is needed to simply maintain the current standard of living of the population. The growth of GDP during the 1980s (1982 to 1988) barely exceeded 2.6 % in constant prices.

Foreign debt (pages 37-38)

- The negative balance of payments in Benin creates a structural deficit at the commercial balance level. Despite additional services and influx of capital (loans, foreign aid, and debt relief), the balance of payments is practically as large as the value of all domestic imports. This deficit can only be financed by structural adjustment loans from the World Bank, IMF, etc. In 1990, foreign debt represented more than 300 billion FCFA or 70 % of export and re-export revenues;
- State and public enterprises, incapable of financing their deficit, have accumulated debts and arrears in payments to the banking system and foreign creditors. The insolvency of the State finally led to the complete bankruptcy of the financial system in 1989. (p 39)

Land management and tenure (page 49)

- Land management and tenure system - access to land is becoming increasingly difficult in the south of the country, where barely 5 % of land holdings, as opposed to 20 % in the north, are greater than 5 ha. Fallows are becoming increasingly rare, and land holdings which are already very small, are reduced in size again as they are divided out through inheritance.

Other problem areas

- The network of waterways experiences problems of continuously declining water levels, sedimentation and invasion of floating vegetation (the water hyacinth in the case of water expanses in southern Benin); (p 51)
- Degradation of the vegetative cover through irregular and uneven rainfall, population pressures, land clearing, overgrazing and transhumance, wildfire and forest exploitation, thus creating fragile ecological zones; (pp 57 & 58)
- Health; (pp 23 & 24)
- Erosion and degradation of soils; (p 59)
- Coastal erosion and degradation of littoral and fluvial ecosystems; (p 60)
- Waste management; (p 62)
- Research; (p 70)
- Shortcomings in execution of programmes by NGOs. (p 75)

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

- Overwhelming concern over the general extent of coastal erosion along the Gulf of Benin coast has led the authorities of Benin and Togo to create a bilateral Commission to address this issue; (p 60)

- A National Commission responsible for addressing pollution and improving the environment was created by decree of March 8, 1974;
- A National Committee for UNESCO's Man and the Biosphere (the MAB Committee) was created by decree of July 14, 1978. Its objectives are the development of scientific knowledge concerning the rational management of natural resources, to ensure their conservation, to train competent research teams and to transfer this information and awareness to decision makers and the population of each country;
- By decree of September 5, 1980, the National Committee for Potable Water and Sanitation was created to formulate and follow the implementation of programmes;
- Different services and departments at Ministerial level as well as NGOs and various associations are also concerned with environmental questions;
- Numerous meetings have been organized around the themes of health and environment, population and development, women and development etc.; (p 72)
- The Environmental Action Plan (PAE) has also been launched to study the equilibrium between man and his environment within the perspective of sustainable development. The PAE exercise will entail meetings of concerned parties, specific studies, workshops and seminars; (p 78)
- Since 1989, Benin has opted to change its political and economic orientation toward an open political system based on a democratic renewal and the principle of a liberalized economy in order to promote private initiative, attract foreign investments and stimulate production in all areas of the economy. (p 40)

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

- Improve on NGO activities; (p 76)
- Review concept of project management by introducing systems that allow for full accounting in a way that permits evaluation of project outputs relative to capital invested. Better evaluation of role played by technical assistants ("Projects are more a response to the preoccupations of donors than to those of national strategy" - MDRAC, Rural Development Policy Project Document, 1990); (p 77)
- To ensure national resource management:
 - Curative approach (combat coastal erosion, desertification, etc.);
 - Anticipatory approach - to foresee possible negative effects on the environment of certain activities whether suspected or unsuspected (e.g. adapting technologies to local conditions);
 - Planning approach - consider ecological aspects as an integral part of and a prerequisite to development. (p 78)

- Strategy of PAE:
 - participation of all actors: public, private, urban and rural;
 - sensitization, training, communication and dialogue;
 - continuation of international efforts and improved coordination between donor agencies etc. (p 78)

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

- Ground Water Resource Inventory Project financed by the Islamic Development Bank; (p 51 - Groundwater)
- A host of different projects directed by the Department of Water, Forest and Hunting (DEFC) and financed by several donors have just completed their terms. These include the National Park Management Project (FED), Watershed Management Project (UNDP/FAO), Multiple Use Tree Plantation Project (UNSO), Firewood Plantation Project (FAO/OPEP) and Forestry Development Project (IDA/KFW), all of which were terminated in December 1990; (p 45 - forest resources).
- Benin hopes to finance projects through "public investments the costs of which can only be supported by private economic agents and the willingness of the public, i.e., rural road construction, hydro-agricultural management, human and animal water needs, preservation and reconstitution of natural resources, etc. ..."; (p 76).
- The Environmental Action Plan activities (see Capacity building initiatives) are supported by a number of diverse development agencies including UNDP/UNSO, the World Bank, the German Cooperative Office (GTZ), the French Aid and Cooperation Fund (FAC), etc. (p 78)

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

- Since 1985, the Dahito Energy Systems Company (ENERDAS) has undertaken the promotion of solar and wind energy sources; (p 54)
- Research is being conducted in the area of natural gas as a source of energy. Studies have been undertaken by the National Centre for Agricultural Education (CENAP); (p 54)
- Briquettes - this idea was conceived by the Department of Industrial Research, Technology and Scientific Research Centre of Benin (DRITESE/CBRT). The first conclusive results concern attempts to make a fuel from sawdust treated with a diluted substance (cassava pulp). Still in the experimental stage; (p 54)
- In the last three years of the Beninese-French project PIRATTES (Integrated Research Project for the Improvement of Traditional Salt Extraction), experiments have been conducted using a Breton technique of salt production in evaporation basins without using fuelwood energy. (p 56)

7. INTERNATIONAL COOPERATION

- Since 1981 Benin has been a member of the United Nations Sudano-Sahelian Office (UNSO), specifically set up to address the battle against desertification; (p 59)
- Many foreign organizations (e.g. Euro-Accord, Volunteer Services) contribute to improving the environment; (p 75)
- Confronted today with a profound socio-economic crisis, the government has found it necessary to adopt a Structural Adjustment programme with the aid of several donors: IMF, the World Bank, etc. ...; (p 78)
- For Benin, international co-operation in the domain of development must take into account the following priorities:
 - terms of exchange - intervention should contribute to reduce the disequilibrium between North and South by concentrating on the deteriorating terms of trade. Efforts should be made to improve revenues of the countries of the South by offering more attractive prices for their production;
 - technical assistance - in defining development projects and programs, possibilities of improving them at national level need to be better examined. This requires, as a prerequisite, utilization of national expertise with recourse to expatriate technical assistance only when absolutely necessary. That way programme budgets could be reduced since expatriate expertise often weighs heavily upon development programme budgets;
 - training of civil servants - in analyzing and monitoring environmental inputs of development projects;
 - sharing of information;
 - debt conversion - the support of efforts to restructure national economies can be translated into reconversion of external debts for environmental credits. (p 78)

8. EXPECTATIONS FROM UNCED

No mention

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BURKINA FASO

Full Title: Rapport du Burkina Faso: "Fondements pour un développement durable"
Date of Report: April 1991
Version: Final
Original Language: French
Other Language(s): -
Total Pages: 187
National Contact Address: Ministère de l'Environnement et du Tourisme

UNDP Contact Address: UNDP Resident Representative
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1. DRAFTING PROCESS

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The report was written by the Groupe National du Travail (GNT) (National Working Group) comprising the Comité National de Lutte contre la Désertification (CNLCD) (National Committee to combat desertification). The CNLCD was composed of representatives from:

- Ministry of Environment and Tourism
- Ministry of Agriculture and Animal Husbandry
- Ministry of Secondary and Higher Education and Scientific Research
- Ministry of Information and Culture
- Ministry of Transport and Communications
- Ministry of Equipment
- Ministry of Planning and Cooperation
- Ministry of Health and Social Affairs
- Ministry of Territorial Administration
- Ministry of Peasants' Cooperative Action
- Office for NGO matters

Other Ministries and Government Agencies:

The CNLCD was extended to include representatives of other Ministries and organizations.

- Ministry of Trade and Supplies
- Ministry of External Relations
- Economic and Social Revolution Council (CRES)
- Burkina Association for the Protection of the Environment (ABUSE)
- National Office for Maintenance, Cleaning and Embellishment Services (ONASENE)

A large number of other Ministries and national institutions looked at the report for amendments (p 165).

NGOs, Grassroots Organizations and Public Involvement:

- No mention of NGO participation in actual drafting of the report, but the Permanent Secretariat of NGOs and the Office for NGO matters reportedly looked at it for amendments. (A list of NGOs involved in environmental matters is given on page 163).
- No mention of grassroots or public involvement, but about 40 individuals from the private sector as well as representatives of inter-African/local cooperation organizations reportedly looked at the report for amendments (p 166).

2. PROBLEM AREAS

Population and living conditions:

- Availability of drinking water - one of the major problems is maintenance and reparation of equipment to ensure continuous distribution; WHO studies have shown that 80% of diseases are caused by poor water quality; (p 70)
- Management of waste water and human waste;
- Management of domestic and industrial waste;
- Population growth (overpopulation) exerts pressure on land resources and reduces the effects of development actions in the health, education, housing and urban services sectors; (p 75)
- Negative balance of payments and important foreign debt (pp 14, 15 & 16). With one of the lowest GDPs per capita, Burkina Faso is one of the poorest countries in the world; (p 14)
- Food security; (p 110)
- Health sector lacks proper infrastructures etc.;
- Agriculture: rigorous climatic conditions (drought), land pressure, soil erosion, etc. give rise to nutritional problems; (pp 20 and 31)
- Degradation of ecosystems: brush fires; abusive cutting down of trees; anarchical land clearing; overgrazing; drought, etc.; (pp 58-60)
- Mining: safety in mines (mine collapses are frequent and exploitation methods are inadequate), health problems due to deplorable hygienic conditions at the sites, environmental problems resulting from abandonment of exhausted quarries without any provisions to restore the natural setting. (p 46)

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

- New and renewable sources of energy and biomass are still at the experimental stage. To avoid ecological degradation, a massive distribution of improved stoves has been effected, with the construction of 350,000 units between 1986 and 1987; (p 7)

- In order to ensure the protection and rational management of land and all the other natural resources, Burkina Faso promulgated an ordinance and a decree concerning agrarian and land re-organization, in August 1984 and in August 1985 respectively; (p 21).
- The number of drinking water distribution points in rural areas (modern wells etc.) rose from 3,450 in 1981 (21% of area covered) to 13,707 in 1989 (69% of area covered), the present objective being to supply 20 litres per day per person; (p 37)
- Construction of dams to store water for agriculture;
- Hunting had been prohibited by the authorities from 1980 to 1984. It is now permitted but based on rational exploitation methods for food reasons:
 - thus creation of hunting sectors (13 for the 1990/91 hunting season) were placed under the responsibility of game wardens;
 - a village hunting system and hunters' associations have been set up (p 45).
- Creation (1986) of the national office of maintenance, cleaning and embellishing services (ONASENE) within the Ministry of Environment and Tourism to deal with waste management; (p 65)
- A large number of environmentally oriented departments have been created within the various government ministries. Furthermore, the government has encouraged the creation of private institutions (NGOs etc) working for environmental protection; (pp 89-92)
- Migration organized by the State as a means of reducing overpopulation in certain areas; (p 75)
- Injecting of environmental concern through social obligations (festivities, weddings, various ceremonies):
 - planting of a tree at every social celebration using the slogan: "every tree has its joys and every joy must have its tree";
 - donation of improved stoves as a wedding gift.
- Involvement of NGOs, social groups and the population in actions to combat the different causes of desertification; (p 85)
- Organizing widespread activities, to combat desertification, involving extensive participation of women; (p 85)
- Various legal texts governing land, forestry, fauna, water resources and animal husbandry were drawn up between 1980 and 1990 (pp 85-87).

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

- Control population growth;
- At the regional level, cooperation between research entities in the field of nature conservation and a better knowledge of species is still rudimentary and should be developed and improved; (p 62)

- Food security and self-sufficiency: development of irrigation in farming, diversification of crops, etc.;
- Improved income and a better standard of living: better organization of rural structures, promotion of women's activities in development, improvement of women's working conditions, setting up of a better price policy, etc.;
- Conservation and optimal use of land resources through agrarian and land re-organization; (p 104)
- Improvement of infrastructure in general;
- Elaboration of legislative texts (water, environment etc.);
- Encouragement of grassroots participation in development in Africa:
 - literacy campaigns, professional training;
 - give support to the population through land distribution, loans, technology etc.
- Give new impetus to the actions of sub-regional or regional organizations e.g. Economic Community of West Africa (CEAO);
- At the multilateral and bilateral levels, donors should help African States formulate and apply endogenous programmes; (p 108)
- Exchange of information and technology transfer;
- Urgently deal with the serious debt problems of developing countries;
- Ensure a continuous development of human resources;
- Attain the equilibrium of the ecosystems and the environment;
- Increased protection of intellectual property rights in developing countries;
- Respect, by industrialized countries, of the New International Economic Order (UN General Assembly Resolutions 3201 [S-UI] and 3202 [S-UI] of 1 May 1974) and of the Charter of rights and obligations of States, so that the countries of the South can enjoy fairer terms of trade. (p 117)

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

- Since joining the World Bank in 1963, 32 development loans have been granted through the International Development Agency (IDA); (p 113)
- Multilateral loans: Principal donors are the International Development Agency (AID) and the Aid and Development Fund; (p 147)
- Bilateral loans: France, through the Caisse Centrale de Coopération Economique (CCCE), is the leading donor;

- Bank loans and suppliers credits: Bank loans mainly come from the Caisse Autonome d'Amortissement, CREDITANSALT BANK, the Crédit de Côte d'Ivoire, the BICICI of Côte d'Ivoire and the French Bank of Foreign Trade (BFCE). Suppliers credits mainly come from the companies TATA and SANTANA; (pp 147-148)
- Taxes, fines and other receipts from the forestry sector contribute considerably to the State budget; (p 5)
- All environmental and development projects need funding; (pp 108-110)
- Scientific and technological research requires external funding; (p 11)
- Hydroelectric power: funding being sought for the Noumbiel dam the site of which is in the Mouhoun area on the border with Ghana; (p 42)
- Water development projects require funding; (pp 55-56)
- The "Second Urban project" (sanitation, waste management in Ouagadougou and Bobo Dioulasso) is financed by the World Bank, Italy and Burkina Faso. (p 66)

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

- Use of improved stoves to reduce consumption of firewood;
- Utilization of solar energy (driers, boilers, batteries); (p 88)
- Research is being conducted in utilization of biogas. (p 89)

7. INTERNATIONAL COOPERATION

- Unfair terms of trade: "the system is characterized by the domination of the North over the South through the principles of GATT"; (p 117)
- International financial aid is not enough to cover all developmental needs; more efforts should be made;
- Private banking institutions lend at very high interest rates, thus systematically seeking financial gain in projects rather than the economic benefit of the borrower;
- In granting development aid, donor countries or institutions should not make a linkage between the aid and, for example:
 - the obligation to buy from the donor country, even if costs are lower in another country;
 - technical assistance from the donor country in utilizing the aid (pp 110-118).

8. EXPECTATIONS FROM UNCED

"Since the years of the great drought (1973/74), we have embarked upon a process which will undoubtedly lead to our full adhesion to the resolutions and recommendations of Brazil 1992."

"May the 1992 Brazil Conference strengthen us further towards this goal (of uniting our efforts with those of other countries to attain the objectives) and may concrete decisions be taken to commit the International Community to our common heritage, the Earth". (Preface, page I)

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BURUNDI

Full Title: Rapport National sur l'Environnement et le Développement

Date of Report: July 1991

Version: Final

Original Language: French

Other Language(s): English

Total Pages: 146 (F), 145 (E)

National Contact Address: Ministère de l'Aménagement, du Tourisme et de l'Environnement
Bujumbura, Burundi

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1. DRAFTING PROCESS

National Committee: Editors & Authors:

The report was prepared by a national committee appointed by the Minister of Land Development, Tourism and Environment. The committee was organized in five sectoral subcommittees and the work was coordinated and put into final form by the bureau of the National Committee. The report was formally approved by the Council of Ministers.

Other Ministries and Government Agencies:

The National Committee members came from the following ministries:

- Prime Minister's Office and Ministry of Planning
- Ministry of External Relations and Cooperation
- Ministry of Agriculture and Livestock
- Ministry of Rural Development
- Ministry of Land Development, Tourism and Environment
- Ministry of Interior and Community Development
- Ministry of Higher Education and Scientific Research
- Ministry of Trade and Industry
- Ministry of Energy and Mines
- Ministry of Public Works and Urban Development
- Ministry for Women's Promotion and Social Protection
- Ministry of Public Health

NGOs, Grassroots Organizations and Public Involvement:

Two consultants from UNFPA and UNDP assisted the National Committee.
No public consultations were held.

2. PROBLEM AREAS

- The state of being land-locked;
- Over-exploitation of soil resources because of agriculture;
- Gradual disappearance of natural forests resulting in local and regional climate changes;
- Main source of energy is still woodfuel, which implies deforestation;
- Decline of livestock because of under-exploitation;
- Lack of skilled personnel, such as veterinary doctors and technicians, contributes to poor pasture and poor herd management;
- Population growth of 3.06 % per annum exerts pressure on the meager land resources;
- Efforts remain insufficient to ensure optimal health conditions for the entire population (inadequate financial resources);
- Protection of water resources, especially in terms of quality;
- Other constraints to development include a low rate of domestic savings and hence growing debt, shortage of capital and qualified labour, difficulty in raising the per capita income and a private sector lacking dynamism;
- Lack of human, material and financial resources to protect nature reserves effectively and at the same time cater for the development of adjacent populations.

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

- Water-related projects in Burundi include the prevention of groundwater pollution, the extension of drinking water supply networks in urban and in rural areas and sanitation in cities;
- Research programmes have been launched aimed at diversifying sources of energy while integrating environmental factors;
- Approximately 109,000 hectares (or 3.9 % of the country) are protected areas. Legislation and regulations governing these areas are already in force and more are under preparation (see Executive Summary);
- Legislative and regulatory texts in force include the Urban Code, the Mines and Quarries Code, the Forest Code, the Land-use Code. Texts under preparation include the Water and Waste Code as well as the Burundi National Environment Strategy (SNEB) (p 123);
- A structural adjustment programme is under way to stimulate a more balanced growth. Reforms have the following targets:
 - an annual GDP growth rate of 4%, then 5%, in real terms and concomitant monitoring of inflationary pressures;

- a reduction of the debt service ratio accompanied by an increase of official external;
- a reduction of the current account and budget deficits (p 30).

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

- A national coordination unit is required to address the environmental situation. Coordination could be enhanced by the establishment of an "Environment unit" in each Ministry;
- Use of fuelwood is a serious threat to the natural tree cover needed to protect soils and prevent climate change; it is therefore imperative to diversify energy sources, adopting peat, hydroelectricity, solar energy and biogas;
- Promotion of public awareness and education:
 - Radio and television should increase visits to the population at the grassroots level, targeting women and youth in rural areas;
 - the agricultural, livestock, health and industrial sectors should use the press to reach craftsmen, stockbreeders and farmers;
 - the services responsible for environment should promote the establishment of "Nature Conservation Clubs" in schools in both urban and rural areas. The acute problem of population pressure should be stressed.
- Research programmes should focus on the improvement of the habitat, food self-sufficiency, "health for all by the year 2000", the diversification of energy sources and drinking water reserves;
- An increase is required of human, material and financial resources for development and for services responsible for monitoring and evaluating the impact of development activities on the environment;
- Agricultural land reclamation (swamp development, irrigation, development of available land) must be the primary concern of any development project. Farmers will also need improved seeds and sustained and regular crop protection as well as better farming methods. Agro-forestry should be intensified for afforestation programmes;
- There should be a systematic evaluation of education levels so as to identify clearly the possible deficiencies and correct them accordingly or consider other orientations;
- Radio, television and the written press as well as literacy campaigns should stress environmental topics (health, habitat, agriculture and livestock) using Kirundi so that messages are accessible to the majority of people;
- Broaden the role played by local NGOs in training and education;
- Strengthen the role of international organizations in Burundi especially in the areas of training and information;

- Within the Economic Community of the Great Lakes Countries (CEPGL), the exchange of information and provision of technical staff should be intensified in various areas such as education and journalism.

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

- Balance of payments support funding (IDA and other donors: US\$128 million) represented 15.7% of imports for the 1986-1989 period (p 32);
- Financial resources for livestock development will be increased over the next five years. A total of Bu. F 6,893 million (equivalent to US\$39.4 million at the November 1991 exchange rate) will be devoted to the sector, representing an increase of 149% compared to the 4th five-year plan. Assistance to stockbreeders will take the form of loans to promote their activities;
- The 1988-1992 five-year plan has allocated more than Bu.F1 billion (over \$US6 million) to forestry and afforestation, but this will only partially solve the problem (p 105).

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

Biogas was introduced in 1981, and by 1989 there were 141 digesters in operation producing about 540.417 cubic metres per year. Beneficiaries are mostly institutions (schools, army barracks, hospitals, prisons) with only a few private individuals (p 68).

The Burundi Energy Study Centre (Centre d'études burundais en énergies alternatives, CEBEA) will continue experimentation of solar and wind energy use through the installation and monitoring of photovoltaic (PV) lighting systems, solar refrigerators, PV water pumps, solar industrial water heaters, solar crop dryers and wind-powered pumps (p 106).

7. INTERNATIONAL COOPERATION

Human and financial resources now devoted to traditional education and information will be required for environmental education and information. The international community could contribute to environmental education, thus enabling least developed countries to take advantage of experience acquired in the area (p 11).

Burundi needs international solidarity in implementing energy research programmes since present human and material resources are still inadequate (p 13).

Regional or international institutions are involved in some areas of the energy sector, including the Société d'Electricité des Grands Lacs (EGL = Great Lakes Electricity Company), SINELAC (joint electricity company between Zaïre, Rwanda and Burundi), OBK (Kagera River Basin Organization), ECA (Economic Commission for Africa), Preferential Trade Area (PTA) Energy Subcommittee, IEPF (Energy Institute for Francophone Countries) and CRAES (African Regional Centre for Solar Energy) (p 107).

International cooperation agencies assist in implementing health programmes (family planning, AIDS prevention, immunization campaign) (p 115).

In training and information projects, the various international cooperation partners could assist Burundi in improving the present quality and quantity these projects (p 120).

8. EXPECTATIONS FROM UNCED

- The Conference should review the United Nations intervention mechanisms in the environment and development sectors;
- UNCED should be an agent of sensitization. The UN should help encourage awareness in developing countries and create favourable conditions to environmental protection and development through:
 - review of commodity prices;
 - in-depth study of debt problem and establishment of flexible credit mechanisms;
 - modern technology transfer mechanisms.
- After UNCED, international financial institutions (IMF, World Bank, etc.) should support sustainable development in developing countries by providing resources for projects evolving from Environmental Action Plans prepared by those countries;
- UNCED should promote the establishment of a United Nations Fund for disaster prevention;
- UNCED should be the starting point for the promotion of environmental research in developing countries;
- UNCED should launch a vast support programme to environmental education in every country, particularly in developing countries;
- UNCED should support peace initiatives throughout the world;
- Loans and grants to developing countries should take into account qualitatively and quantitatively, the "environment" factor so that all sectors benefit from development integrating nature conservation;
- Financial resources allocated should include funds for the development of agriculture and livestock among populations adjacent to protected areas;
- Environmental protection in developing countries will succeed only if the basic requirements of the people are satisfied, namely food, health, habitat and education (p 127-129).

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(English version)

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CANADA

Full Title: Canada's National Report
Date of Report: August 1991
Version: Final
Original Language: English and French
Other Language(s): -
Total Pages: 149
National Contact Address: Ministry of Supply and Services, Canada
 or: Enquiries Centre
 Environment Canada, Ottawa, Ontario K1A 0H3

UNDP Contact Address: N/A

1. DRAFTING PROCESS

National Committee: Editors & Authors:

Prepared by the Government of Canada, with the assistance of a Steering Committee

Other Ministries and Government Agencies:

The Canadian Council of Ministers of the Environment
 The Round Tables on Environment and Economy

NGOs, Grassroots Organizations and Public Involvement:

Environment, development, labour, youth, women's and other organizations represented through the Canadian Participatory Committee for UNCED (CPCU)

The indigenous people of Canada (through the Assembly of First Nations, the Native Council of Canada and the Inuit Circumpolar Conference)

Business and industry (through the Canadian Secretariat to the International Chamber of Commerce and the Business Council on National Issues)

Various NGO sectors: environmental movement, the development community, indigenous groups, the United Nations Association in Canada, youth, women, labour, inter-faith science/academic and peace.

2. PROBLEM AREAS

Localized problems:

- Urban Smog
- Polluted Rivers
- Presence of persistent toxic substances in the ecosystems
- Threatened and endangered species

Environmentally unsustainable practices in:

- Forestry: Deforestation, inadequate reforestation, clear-cut logging, use of pesticides and disputes over forest land uses
- Agriculture: A high proportion of agricultural farmland facing the threat of urban expansion, of soil depletion and of industrial pollution, use of fertilizers and pesticides
- High seas fishery operation: Pressure of overfishing

Global Concerns:

- Depletion of Ozone Layer
- Global Warming

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

Policy, Planning and Strategy

- Realization of a federal sustainable development strategy, Canada's Green Plan, of December 11, 1990;
- Use of economic instruments for environmental goals such tax incentives or deposit-refund systems; (p 72)
- Remedial actions have begun on some of Canada's most pressing environmental problems; the Canadian Acid Rain Control Program, the National Contaminated Sites Remediation Program are part of these actions; (p 80)
- The Canadian Institute of Chartered Accountants is developing a methodology for the accounting of environmental liabilities;
- A number of major industry associations have established environmental codes of practice to establish industry-wide approaches to environmental practices;
- Environmental audits are playing an increasingly important role in Canada's businesses; (p 89)

Institutions

- The Federal Department of the Environment was created in 1971. Today every province has a Ministry of Environment; (p 58)
- Formation of the Canadian Environment Industry Association. The association represents companies engaged in the environmental industries;

Legislation (page 65)

- Canadian Environmental Protection Act (CEPA); new approach to addressing environmental problems;

- Prince Edward Island amended the Dangerous Goods Transportation Act to impose personal liability upon corporate directors for infractions of the Act;
- Ontario's Municipal and Industrial Strategy for Abatement (MISA) regulates municipal and industrial discharge;
- The "polluter pays principle" is being incorporated into environmental laws;
- The federal government has taken the initiative with regard to public consultations through mechanisms such as Environment Canada's Policy for Public Consultations and the incorporation of consultations as a fundamental principle underlying key pieces of policy and legislation;

Information (page 77)

- Environmental reporting has become a legal requirement;
- An important function of the governments in Canada is to provide consumers with information about the marketplace;

Environmental education (page 79)

- At the post-secondary level, some faculties and departments of environmental studies have been established;
- Many schools and school boards have developed and implemented an environmental curriculum;
- In national Parks, national historic sites, and provincial parks, interpreters encourage the public to take an interest in global environmental issues and take action on local issues;
- Environment Week is dedicated to promoting environmental awareness;

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

The Government is trying to integrate economic development and environmental protection under the Green Plan, which includes over 100 specific actions to help achieve national environmental goals and targets (p 102).

Green Plan Goals are:

- Clean Air, Water and Land
- Sustainable Use of Renewable Resources
- Protection of the Special Spaces and Species
- Preservation of the integrity, health, biodiversity and productivity of Canada's Arctic Ecosystems
- Global Environmental Security
- Environmental Responsible Decision-Making
- Assurance that the operations and procedures of the Federal Government exceed national targets for sustaining the environment
- Minimize the Impact of Environmental Emergencies (table 4)

Main targets of the Green Plan (page 110)

- 50% reduction of waste production before the year 2000
- Virtual elimination of persistent toxic discharges
- Setting aside 12% of the country as protected space
- Completion of the National Park system before the year 2000
- Stabilization of emissions of greenhouse gases at the 1990 level by the year 2000
- Phasing-out of CFCs by 1997
- 50% reduction of the sulphur dioxide emissions and a capping of acid-rain-related emissions, both by 1994
- Assurance that the federal government exceeds national targets and schedules for sustaining environment

Other recommendations from the Report (page 120)

- Emphasis on economic incentives and disincentives as well as on the improvement of business decision-making and management of economic and environmental issues
- Direct participation of aboriginal peoples in all stages of the planning process
- State of the Environment Reports are and will continue to be periodically produced
- The government recognizes the contribution that can be brought in by the environmental NGOs
- New methods of environmental impact assessment of private and public, national and International, projects are being implemented
- A priority of the government is to represent the views of Canadians in decision-making, in particular through consultation
- Coordinated International action is a necessary condition for bringing about effective solutions to these problems

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

The Green Plan (included in the Report), represents the way the Government of Canada looks at economic development and environmental protection. This Plan requires resources totalling \$3 billion (US\$2.63 billion at July 1991 exchange rates) over six years (table 5).

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

Canada take part in the exchange of technical expertise and environmental information through organizations such as:

- The United Nations Environment Program (UNEP)
- The Economic Commission for Europe (ECE)
- The Organization for Economic Cooperation and Development (OECD)
- The World Meteorological Organization (WMO)
- Economic Commission for Latin America and the Caribbean (ECLAC)

The government actively supports environmental science and technology through a variety of programs (p 75).

The Global 90 Fair was an effort to integrate business and the environment and will be repeated in 1992 (p 76).

7. INTERNATIONAL COOPERATION

- The Canadian International Development Agency (CIDA) has adopted the Environment and Development Policy. The Agency has assisted in preparing national conservation strategies in several countries including Pakistan, Nepal and the Caribbean region and a program for the Sahel region in West Africa. Also provides support to international non-governmental organizations (NGOs) in developing countries to promote environmentally sustainable development.

Various organizations involved in the preparations for UNCED have also received support from CIDA, and Canada is assisting Guinea, Indonesia, Peru and the Central American region with the preparation of National Reports. Canada has given substantial support to the UNCED process itself (p 69).

- The International Institute for Sustainable Development (IISD) was established in 1990 to integrate the concept in national and international decision-making
- Founding member of the Regional Environment Centre for Central and Eastern Europe
- Active role on environmental issues at G-7 and OECD meetings
- Part of the Arctic Environment Protection Strategy

8. EXPECTATIONS FROM UNCED

The opportunity for the nations of the world to make a common commitment to meet the challenge of sustainable development (p 128).

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CHAD

<i>Full Title:</i>	Rapport National
<i>Date of Report:</i>	July 1991
<i>Version:</i>	Final
<i>Original Language:</i>	French
<i>Other Language(s):</i>	-
<i>Total Pages:</i>	90
<i>National Contact Address:</i>	Comité National (COMNAT) Ministère du Développement Rural (Environnement et Agriculture) N'Djaména, Repulique du Tchad
<i>UNDP Contact Address:</i>	UNDP Resident Representative Boite Postale 906 N'Djaména, Republique du Tchad Tel: (235-51) 4100 Fax: (235-51) 6330

1. DRAFTING PROCESS

National Committee: Editors & Authors:

Report was drafted by the National Committee (COMNAT) for the preparation of the United Nations Conference on Environment and Development. The following ministries were represented:

- Rural Development (Environment and Agriculture)
- Planning and Cooperation
- Animal Husbandry
- National Education
- Information, Culture and Tourism
- Public Works and Transport
- Mines, Energy and Water Resources
- Justice
- Public Health and Social Affairs

Other Ministries and Government Agencies:

See above

NGOs, Grassroots Organizations and Public Involvement:

No mention

2. PROBLEM AREAS

- massive foreign debt due to massive external funding;
- communication and transport problems impede on inter-state exchanges; territorial air transport lacks navigation and meteorological equipment;
- precarious freshwater resources due to bad climatic conditions;
- development of fisheries and livestock breeding is hindered by powerful ethnic and social traditions;
- difficulty in fighting informal trade along the border as part of it is in the desert region;
- growth of small scale business concerns held up by impossibility to obtain loans;
- development of tourism impeded by insufficient of financial, human and material resources, non application of legislation, lack of statistics and analyses of markets, drought and poaching;
 - non regulation of importation and utilization of agricultural pesticides, the effects of which are felt on fish and water fauna as well as soil fertility;
- deforestation because of over-exploitation of certain zones.

The main constraints which affect the country's development are:

- food security;
- energy security;
- insufficiency of resources;
- poor quality of life and housing;
- landlocked in two ways (internal and external);
- underdevelopment of the industrial sector;
- low level of research in all fields (p 77).

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

- Soil conservation: in the south of the country, soil fertility is maintained through the use of oxen which provide manure. They also provide "animal power" in agriculture. (p 18)
- As part of the CILSS (Comité Permanent inter-etats de lutte Contre la Secheresse dans le Sahel) activities, the public is being involved in soil conservation projects through educational and information programmes on environment (p 18).
- Rural population: training in the use of new varieties of seeds, better adapted farming methods, utilization of fertilizers, etc. This training is carried out by the Office National du Développement Rural (ONDR), the Direction de l'Enseignement et de la Formation Professionnelle Agricole (DEFPA) and the Veterinary Services (p 20).
- Small scale enterprises and industries: in order to encourage the establishment of these ventures, the State intends to take such measures as: a fiscal and budgetary policy aimed at reducing investment costs; a monetary and loan distribution policy; adoption of legislation governing trade, mining, etc.; revision of electricity costs (p 36).

- NGOs: the State intends to encourage community associations and NGOs to play a bigger role in development work (p 37).
- Transport: the Government has decided to encourage the participation of the private sector in the field of transport. Thus, CTT (Coopérative des Transporteurs Tchadiens) was dissolved in 1989 for the benefit of private transport groups (p 42).
- Waste management: a solid waste management project is being studied by N'Djaména municipal authorities; it will consist in collecting wastes from urban centres and transferring them to discharging sites (p 53).
- Women: sensitization of women and encouraging them to get involved in environmental and development activities (p 57).
- Desertification: most of the afforested zones were created as part of the National Tree Week instituted in 1972 (p 63).
- Research: after the creation of the Farcha laboratory in 1952, research has been oriented towards combatting the most important infectious animal diseases. Presently the laboratory produces various vaccines including those against cowpox and pleuro-pneumonia (p 68).
- Legislation: a number of legal texts relate to the protection of the environment, e.g.: decree instituting the National Week of the Tree (1972); ordinance No. 14/63 regulating hunting and protection of nature; the N'Djaména manifest on the conservation of the national heritage of Chad (August 1976); decree No. 097/PR creating the National Committee of Household Energies (1989); Forestry code (July 1988) for the conservation, protection, exploitation, enhancement and improvement of forest resources (p 72).

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

- Establish a permanent administrative institution in the form of a national commission for environment with a view to:
 - proposing to the Government a programme and a national position on all environmental questions;
 - harmonizing actions within the context of environmental international relations;
 - starting and backing the development of sensitization and training actions;
 - encouraging and enabling public participation in environmental policy.
- Draw up and enforce a Code of Environment
- Strengthen international cooperation in matters of environment
- Promote environmental education through:
 - letting schools participate in national development while taking environmental problems into account;
 - teaching the protection and respect of nature to school children;
 - strengthening the link between the educational system and the environment;
 - assisting school graduates in settling into the rural environment.

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

"Almost all public investments are financed by external aid since 1980. Budgetary aid mainly consists of French and American subventions" (p 10).

"Funding is principally ensured by France, the World Bank, the EEC, UNDP. Other bilateral sponsors are the USA, Italy, Switzerland, the Netherlands, Germany, etc." (p 11).

Agriculture: the CILSS DIAGNOSTIC PERMANENT project (DIAPER) initiated in 1984, is financed by the EEC. The project addresses the reinforcement of a permanent scheme for agricultural surveys and follow-up of livestock markets (p 23).

Animal husbandry: a number of surveys have been funded by F.A.C. (French Aid and Cooperation Fund) and the CILSS (p 28).

The 1988/89 vaccination campaign, financed by the EEC as part of the PARC project, enabled the vaccination of 2,492,136 head of cattle against cow pest and contagious pleuro-pneumonia (p 28).

National Animal Husbandry Project (PNE), initiated in 1989, is financed by the World Bank, FAC and the Netherlands (p 30).

Small scale enterprises and industries:

- starting up loans financed by the French Caisse Centrale de Coopération Economique (CCCE) and the European Investment Bank (p 35).
- UNDP is funding a technical assistance project - carried out by UNIDO in collaboration with the Office de Promotion Industriel du Tchad (OPIT) - with a view to help business managers identify and evaluate small scale enterprise projects and set up dossiers to obtain bank loans (p 35).
- VITA project (Volunteer in Technical Assistance), financed by USAID, helps would-be entrepreneurs set up companies and in some cases establish their dossiers for loan applications (p 35). Route network: About 4,000 km of priority routes have to be reconstructed between 1988 and 1993. IDA and USAID are financing projects that are mainly aimed at giving Chadian services the necessary means to maintain the routes (p 39). (See Annex: PROGRAMMES ET PROJETS EN EXECUTION OU EN VOIE D'EXECUTION, pages 79-84.)

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

Energy:

- The "Gaz Butane" regional programme is aimed at promoting the utilization of gas as a substitute combustible for charcoal and firewood. This would enable the saving of 1,720 ha of forests in Chad (p 19).
- research is being carried out in the use of solar energy, bio-gas etc.; some NGOs and Catholic mission priests already use solar energy for lighting and reception of water (pp 50-51).

7. INTERNATIONAL COOPERATION

- Among others, Chad is member of the Union Douanière et Economique de l'Afrique Centrale (UDEAC) to which it re-adhered in 1984 after 15 years of absence. It is also member of the Banque des Etats de l'Afrique Centrale (BEAC) (p 38).
- Animal husbandry: In order to protect livestock the Government signed agreements for the harmonization of zoo-sanitary actions at boundaries with neighbouring countries (p 28).
- Energy: CONOCO and ESSO have carried out oil explorations showing that Chad possesses important oil reserves (p 47).
- In the nuclear field, the French Bureau de Recherche Géologique et Minière (BRGM) has effected a number of geological and radio-metric pilot studies in the Borkou-Ennedi-Tebesti (BET) region, giving evidence of several sites with radio-active concentration. In addition, as part of a UNDP project carried out in 1965, systematic geological sampling has enabled the discovery of exploitable uranium-containing sites in Mayo-Kebbi (p 48).
- Forestry: "the international community helps in implementing forestry projects (afforestation, combatting desertification, etc.) (p 52).

In addition, Chad would like industrialized countries to:

- grant additional aid to poor countries such as Chad;
- convert developing countries' debts into financial resources that are compatible with the requirements of environmental protection for sustainable development;
- revise the prices of raw materials to guarantee stable and sufficient income for rural populations;
- transfer appropriate technologies (p 78, Conclusions).

8. EXPECTATIONS FROM UNCED

No direct mention

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CHINA

Full Title: National Report of the People's Republic of China on the Environment and Development
Date of Report: August 1991
Version: Final
Original Language: Chinese
Other Language(s): English
Total Pages: 76
National Contact Address: Foreign Affairs Office
 National Environment Protection Agency
 No. 115 Xizhimenni, Xanxiaojie
 Beijing, Post Code 100035

UNDP Contact Address: UNDP Resident Representative
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1. DRAFTING PROCESS

National Committee: Editors & Authors:

The State Planning Commission set up a Leading Group to prepare the report, which included officials from the State Planning Commission, the State Commission for Science and Technology, the Ministry of Foreign Affairs and the State Environment Protection Agency.

Other Ministries and Government Agencies:

The Leading Group established a drafting group drawing upon the State Planning Commission, the State Commission for Science and Technology, the Ministry of Foreign Affairs, the State Environment Protection Agency, the Ministry of Agriculture, the Ministry of Water Resources, the Ministry of Forestry, the Chinese Academy of Sciences and 69 other government institutions at the local, industrial and educational levels. Professional associations and the mass media also participated.

NGOs, Grassroots Organizations and Public Involvement:

"The views and suggestions of non-governmental organizations and people of various circles [were] fully solicited". Twelve grassroots organizations are listed as having participated in discussion of the report.

2. PROBLEM AREAS

- Feeding, housing and taking care of 1.16 billion people (representing 22% of the world's population) using only 7% of the world's arable land;

- Reconciling environmental concerns with average annual GNP growth of 9% in the 1980s;
- A relatively backward level of science and technology;
- Excessive pressures on the agricultural and forest ecosystems caused by population growth, soil erosion, desertification and natural disasters;
- Shortages in water supply for industrial and household uses;
- Overfishing and marine pollution around developing coastal areas;
- Use of coal as the primary source of energy, with resulting air pollution and acid rains;
- Scarcity of funds preventing the adequate development of pollution control infrastructure;
- Modernization and economic growth will increase the pace of urbanization which will put pressure on cities' infrastructures and worsen urban environmental problems.

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

- Projects on water have been formulated with the completion of 86,000 reservoirs, 25,000 sluice-gates and 200,000 km of river embankment;
- National programmes on the treatment of plant diseases and insect pests have been carried out, resulting in the eradication of pests;
- Several policies have been adopted to convert newly reclaimed farming fields into pastureland;
- An afforestation campaign has been launched to plant trees, shelter belts and windbreak forests, and thus protect farmlands and check sandstorms, especially in North and West China;
- An afforestation programme in the Upper and Mid Reaches of the Yangtze River has already resulted in the planting of trees on 670 thousand hectares of land;
- A flood-control system has been set up to protect farmlands;
- Legislation exists to protect the environment, forestry, grasslands and fisheries (for example, the "Water Law of the People's Republic Of China" and the "Law on Grasslands of the People's Republic of China";
- A number of administrative decrees and local laws have been promulgated on environmental protection;
- Policy measures have been taken to save energy and develop possible new sources for rural areas;
- An environmental protection system with 1,971 environmental monitoring stations has been set up;

- Regulations have been formulated on integrating industrial pollution control with technological renovation, focusing on industrial waste recycling;
- 606 nature reserves were established by 1990 on a 40 million hectare area for the protection of endangered species;
- A ban on tree felling, hunting and fishing has been declared in some areas, enabling the protection of 6,000 species of fauna and 1,000 species of flora;
- A nationwide campaign for recycling the "three industrial wastes" (solid, liquid and gas) has been launched to reduce pollution;
- A strategy integrating socio-economic development with environmental protection has been implemented;
- In Shaanxi province, an Ibis Observatory Post and a research centre on breeding has been established to increase the number of ibises. Furthermore, other breeding centres have been created in various cities to protect endangered wild animals;
- Projects for the artificial propagation of rare tree species like the dove tree have been carried out with success;
- Since the beginning of the 1980s, a large number of facilities have been set up for the treatment of industrial pollution;
- A number of environmental education centres have been established to serve as specialized institutions for public information;
- Efforts have been deployed by the Government to control population growth through increasing public awareness of the importance of family planning and establishing a reward system for law-abiding citizens.

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

PRIORITIES:

- "Unswervingly" give priority to China's national economic development and modernization; "environmental protection, as an important component of the national socio-economic development, must serve the overall purpose of promoting economic progress and improving the people's quality of life" (p 6);
- Continue to adhere to the policy of synchronizing economic planning and development with environmental protection and sustainability concerns;
- Continue to make family planning a basic State policy;
- Attach as much importance to energy saving as to energy development;
- Establish environmental protection strategy within the main agriculture and production sectors;

- Strengthen the State agencies for the nation's environmental protection and adopt new environmental legislation;
- Adhere to the three principles of prevention first, polluter pays, and intensified management (including fines, impact assessment, "pollutant discharge permits", deadlines and evaluation);
- Intensify scientific research in environmental protection and raise gradually investments in this sector in parallel with the growth of China's economy;
- Reinforce environment monitoring and information networks and publish periodical state of the environment reports;
- Support international cooperation on the environment.

OBJECTIVES:

- Attain an average rate of growth of GNP in the 1990s of 6%, with key targets in energy, transportation, agriculture and raw materials, furthering social and economic development beyond the provision of adequate food and shelter (p 55);
- Bring environmental pollution and biosphere degradation under control by the year 2000 with:
 - specific targets for industrial waste, waste treatment, sewage system coverage, treatment of urban sewage, SO₂ discharges, recycling and noise pollution (p 56);
 - specific conservation targets for forests, soil, land-use and nature reserves (p 56).

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

- China seeks "to obtain the requisite financial and technical assistance through extensive international cooperation on the basis of equality and mutual benefit" (p 8);
- Necessary resources and financial assistance should be provided to the developing countries so they can participate better in international cooperation on environment and development, or else they should be compensated for the economic losses incurred in implementing international laws on the environment;
- Additional financial resources are required, and not merely a reorganization of the current levels of development assistance;
- Environmental aid must not be given at the expense of development aid (pp 69-70);

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

- China will need major breakthroughs on coal combustion technology and coal conversion to offset even partially the atmospheric effects of its intense use of coal;

- Developing countries must be provided with the requisite technologies for pollution control and environmentally sound technologies on preferential and non-commercial terms (p 70);
- These technologies are not commodities in the usual sense of the term and their transfer should not be left to market mechanisms only.

7. INTERNATIONAL COOPERATION

- Involvement in the negotiations for preparing the Framework Convention on Climate Change;
- Cooperation with UNDP, UNEP, the World Bank, other international organizations and other countries in the field of environmental protection;
- China has signed a number of international agreements, conventions and protocols.

8. EXPECTATIONS FROM UNCED

- The most important issue at UNCED is the restructuring of the international economic order so as to begin bridging the North/South development gap and thus enable the developing countries to tackle the problem of poverty as well as the global environmental issues;
- The basic principles widely accepted by the international community, as contained in the UN General Assembly resolution 44/228, in the Ministerial Declaration of the Second World Climate Conference, and other major international documents, should be fully reflected in the preparatory process for and the outcome of the Conference (p 71);
- The major economies bear special responsibilities and obligations;
- Every country is sovereign over its territory, national resources and its environmental and development policies;
- The needs of countries with different levels of development and a majority of the world's population should be taken into account;
- Historical and contemporary responsibilities for environmental degradation should be clarified and, where it is fair, differentiated;
- Substantive progress must be made on the issues of transfer of technology with clear and specific provisions for the sources, the scale, use and management of the requisite financial resources;
- China suggests the creation of a Green Fund, to help the developing world in its efforts to reconcile development and environment.

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COSTA RICA

<i>Full Title:</i>	Conferencia de las Naciones Unidas para el ambiente y el desarrollo "Eco 92"—Informe Nacional de Costa Rica
<i>Date of Report:</i>	July 1991
<i>Version:</i>	Final
<i>Original Language:</i>	Spanish
<i>Other Language(s):</i>	Executive summary in English
<i>Total Pages:</i>	241 - 2 annexes
<i>National Contact Address</i>	Comisión del Nuevo orden Ecologico Internacional, Ministerio de Relaciones Exteriores y Culto, San José
<i>UNDP Contact Address:</i>	UNDP Resident Representative Apartado Postal 4540 San José, Costa Rica Fax: (506) 55 37 78 Tel: (506) 55 33 11

1. DRAFTING PROCESS

National Committee: Editors & Authors:

The Report was prepared by the Neotropica Foundation through its programme "Centre for Environmental Study and Policy". The Commission of International New Ecological Order co-ordinated the preparation of the document.

Other Ministries and Government Agencies:

Various professionals from the following sectors and institutions collaborated in the drafting process: Mining, Energy, Transport, Industry, Housing, Health and Services, Education, Agriculture, Forestry, Fishing, Tourism, Department of Communication, Ministry of Planning and Economic Policy, Institute of Aqueduct and Sewerage Systems, Interamerican Institute of Agricultural Co-operation, Institute of Public Works, National University, Centre for Development Studies, and the Scientific Tropical Centre.

NGOs, Grassroots Organizations and Public Involvement:

A technical meeting was held between government agencies and NGOs. The meeting was organized through a two-day workshop. The results of the meeting and the list of participants have been included in the Report (p 199).

2. PROBLEM AREAS

Atmosphere (page 146)

- The report states that Costa Rica has the highest per capita contribution of greenhouse gases in North and Central America resulting from cement production, liquid fuels and damaging land use. Methane gas emissions are also high.

- High emissions of gases that contribute to the greenhouse effect (CO₂, methane and CFC's);

Water (page 148)

- Whilst in 1982 close to 95% of the population had direct connections and/or easy access to water, inadequate sanitation and water supply related to rapid unplanned urbanization is a growing concern;

Oceans (page 153)

- Sea pollution caused by solid wastes, agrochemicals and oil spill is a growing concern;

Soil (page 156)

- Erosion. Estimated soil loss in 1984 was 725 million tons/year (p 156);
- Soil pollution resulting from fertilizers and pesticides;

Housing and working conditions

- Shortage of housing (100,000 and 150,000 house in total);
- Poor working conditions. In 1977, 80,148 work accidents were registered for a work force of 600,000 people;

Human Health (page 176)

- A long-standing tradition of health programmes based on universal access and emphasis on primary health care has brought progress in general but, the nature of health problems are changing and includes increased incidence of vector-carried diseases;

Wastes (page 176)

- Pesticide consumption per capita is higher than in Central America as a whole. Solid waste has been declared a national emergency in two areas in the country (Valle Central and Metropolitan Area of San José).

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

Biotechnology (page 159)

- National Programme of Biotechnology. The programme includes the following phases:
 - The creation of the necessary conditions to develop the production of biotechnological goods;
 - Training and strengthening of new enterprises in the field of biotechnology.

Environmental education

Programme of Ecological Education being developed by the Ministry of Education. The programme is in its initial stages;

- National Master Plan for Environmental Education. The Plan is an overall strategy but its implementation has been partial and limited (p 22 Summary);
- Independent efforts are undertaken by various institutions;

Policies, Programmes and Projects (page 186)

- Project entitled "Parks in Peril: A Conservation Partnership for the Americas";
- Project entitled "Strategy for the Institutional Development of the Biosphere Reserve, La Amistad";
- National Plan for Development 1990-1991 (MIDEPLAN 1990), including a Strategic Programme for the use and conservation of the environment;
- Environmental Planning Programme for human settlements (MIVAH, 1991);
- Soil mapping;
- Forestry Action Plan Costa Rica (FAPCR) includes projects relating to the improvement of environmental conditions and sustainable development of natural resources (p 115).

Legislation (page 189)

- Legal Norms concerning conservation, protection, improvement and control of the natural resources and environment. The norms are part of a framework of Special Sectoral Laws;
- Law on the conservation, improvement and restoration of water and soil (1953);
- Law on conservation of wild fauna (1961);
- National Parks Service (Law N°. 6084);
- The Legislative Assembly is in the process of considering an Environmental Code covering a national system of conservation areas, and one constitutional reform to increase the scope of environmental checks;
- Decree confining all national, private and public organisms to the use of a single methodology to determine land use capacity;
- Various Decrees making compulsory environmental impact assessment in sectors such as mining and energy;
- Studies about the carrying capacity of some of the tourism areas (p 133);

Institutions

- Forestry Department, National Parks Service and Wild-life Department are the three main environmental institutions of the Natural Resources, Energy and Mining Ministry. 33 foundations are directly involved with natural resources conservation and sustainable development;
- National Service on soil and water conservation (SENACSA).

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

Transport (page 38)

- Environmental impact assessment for all new road construction;
- An "Urban Transport Plan in the Grand Metropolitan Area" integrating the environmental issues of San Jose;

Industry (page 63)

- "Policies for adequate environmental waste management". The principal objective of the project is to help the government formulate and implement a policy for solid and industrial waste management;

Education (page 90)

- "Development plan for human resources and the education sector", 1990-1994. The introduction of an ecological approach in the formal curriculum is one of the principal innovations of the Programme;

Agriculture (page 107)

- The new Agriculture Policy (SEPSA 1991) includes in one of its programmes the recommendation that degraded areas be restored through environmental protection;

Forestry (page 115)

- Various projects to establish buffer zones in conservation areas;

Fishing (page 118)

- Creation of an institute of fishing and aquaculture;
- Various projects to research fishing resources;

Tourism (page 132)

- One of the basic aspects of the Operative Plan 1991 is to favour ecotourism. Special attention will be given to environment preservation and the establishment of a new international ecological order;

Mining (page 39)

- Reactivate the Environmental Impact Commission;
- The establishment of a geological data base and the monitoring of the environmental impact of mining projects;

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

There is no mention of funding requirements (p 23)

Conservation

- In 1989 Costa Rica received US\$6.2 million from the United States for biological diversity research and conservation projects. A donation of US\$ 4 million was secured from AID, and through "debt for nature swaps". Investment in conservation was the highest in the world in terms of US\$ per unit area.

Energy

- The National Energy Plan forecasts actions to protect the environment. The Report states that these measures must be financed by enterprises in the various sectors (p 47).

Mining

- The application of the Article 103 of the Mining Code enables the state to raise the necessary resources to restore areas degraded by mining activities (p 40).

Forestry

- The Forestry Action Plan outlines a financial strategy. The government of Costa Rica together with other national sources will contribute 33.7% of the overall budget. The remaining part will have to come from external sources (p 115).

Most sectors require external financing.

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

In 1988, Costa Rica had 12 organizations developing activities in agricultural biotechnology, and 114 professional staff assigned to R&D in agricultural biotechnology. The areas of research were: seven organizations working with molecular, three with citogenetics, fourteen on cells, five with biochemistry, six with immunology, three on radioisotopes, six with biochemical engineering, and six in ecology. Eight companies in Costa Rica apply agricultural biotechnological techniques (p 159, poll from International Institute on Administrative Sciences)

7. INTERNATIONAL COOPERATION

- During the period 1986-1990 Costa Rica developed an important "debt for nature swap". The programme resulted in an exchange of about US\$70 million in debt for a conservation bond; (p 193)
- Various international organizations have been focusing on natural resources research and training (e.g. the Caribbean Conservation Corporation, the World Conservation Union (IUCN-ORCA), World Wide Fund for Nature - United States Conservation Foundation); (p 190)
- Government authorities and NGOs work with conservation organizations from the United States, such as the Nature Conservation and World Wild Fund for Nature; (p 23)

- MacArthur Foundation, the Pew Trusts, Alton Jones, the Packard Foundation and the Noyes Foundation, amongst others, help develop environmental projects in the country;

8. EXPECTATIONS FROM UNCED

(page 201)

- The recognition of the environmental problem as an issue of greatest concern to the biosphere now and for future decades;
- Environmental impact assessment for all development projects;
- Elaboration of principles of ethics to guide behaviour of peoples and nations;
- Establishment of global control mechanisms to enforce treaties and conventions related to environmental protection;
- Extend mechanisms of financial support to cover conservation projects in developing countries;
- Gradual substitution of military service for environmental service;
- Agreements with other tropical countries regarding the protection of biological diversity;
- Financing from the developed countries to safeguard protected areas;
- Promotion of debt for nature swaps;
- Establishment of a fund to promote environmental training and education;
- Evaluation of appropriate technologies for waste management, so as to generate additional incomes and to protect the environment.

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COTE D'IVOIRE

Full Title: Rapport National sur l'Etat de l'Environnement
Date of Report: 05 June 1991
Version: Final
Original Language: French
Other Language(s): English (on diskette)
Total Pages: 89
National Contact Address: Ministère de l'Environnement, de la Construction et de l'Urbanisme

UNDP Contact Address: UNDP Resident Representative
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1. DRAFTING PROCESS

National Committee: Editors & Authors:

The preparation of report was coordinated by the Office of Planning, Directorate of Environment, under the supervision of the Director of Environment, Ministry of Environment, Construction and Town Planning. Seven Working Groups were set up comprising representatives from government ministries and NGOs.

Other Ministries and Government Agencies:

- Ministry of Environment, Construction and Town Planning
- Ministry of Agriculture and Animal Resources
- Ministry of equipment, Transport and Tourism
- Ministry of Industry, Mines and Energy
- Ministry of Scientific Research and Technical Education
- Ministry of Women's Promotion

NGOs, Grassroots Organizations and Public Involvement:

Six NGOs were represented in the seven Working Groups. Three workshops were held during the different phases of the preparation of the report. Financial assistance was received from UNDP.

2. PROBLEM AREAS

- Deforestation caused by encroachment of agriculture (area occupied by primary forests has been reduced from 12 millions hectares in 1960 to 2.5 million hectares in 1991);
- Degradation of soils;
- Savanization and climate change: with the exception of south-western and south-eastern zones, between 1960 and 1986, the deficit in rainfall has gone from 200 mm to 400 mm in the southern forest region;
- Lack of public awareness;
- Bush fires;

- Poaching;
- Use of pesticides (6,000 tons per year) and fertilizers (78,000 tons per year);
- Insufficient housing due to growing population especially in urban areas. Development of slums;
- Health problems caused by inappropriate waste management policies. 25% of hospitalized patients are suffering from ailments linked to inadequacies in waste management;
- Sanitation: in Abidjan, 70% of the population is not connected to the sewage system. For the whole country, it is estimated that 6 million - out of a population of 11 million - people do not have adequate sanitation; (p iii)
- Bacteriological and organic water pollution in the Abidjan lagoon caused by industrial (25%) and urban wastes, rainfall streams and periodical invasion of floating vegetation;
- Eutrophication of continental waters, comprising a number of lakes that provide drinking water;
- The city of Abidjan is affected by pollution and other problems linked with transport;
- Inapplicability of certain regulatory texts relating to forestry, industry and water resources;
- Coastal erosion and degradation of mangroves;
- Population growth partly caused by immigration (rate of 4.4%, one of the highest in Africa, and one third of the population is foreign);
- Animal husbandry and fisheries: national production only covers 43% of the country's needs in animal protein. F CFA 50 billion (about US\$1.7 million at the June 1991 exchange rate) worth of animal protein are imported annually;
- Natural disasters such as floods, tornadoes and tempests;

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

Education and research:

A lot of research activities are carried out on environment related subjects. Main results:

- establishment of a national herbarium of more than 23,000 species;
- improvement of knowledge relating to lagoon fish resources with view to a more rational exploitation;
- listing of the TAI forest as part of the world ecological heritage.

As regards education, environmental subjects are offered to geography students, and sanitation lessons are given to students of Civil Engineering at the University of Abidjan.

Sensitization programmes are also carried out on combatting bush fires, deforestation, energy conservation etc.

Afforestation:

- Between 1960 and 1991, the State's reforestation efforts were between 4,000 and 5,000 ha per year;
- Industrial reforestation is mainly carried out by SODEFOR (Société pour le Développement des Plantations Forestières);
- Since 1966, when this company was created, 80,000 ha have been planted. In 1985, the average cost per hectare was F CFA 800,000;
- In 1988 (decreed the year of Côte d'Ivoire forests), 10,000 hectares were planted. In 1989, almost 4,000 ha were reforested by rural organizations or individuals; but in 1990, this village reforestation only registered 250 ha planted;
- Côte d'Ivoire has 8 National Parks and 3 Fauna Reserves;
- The ongoing project to improve sanitation in the city of Abidjan will reduce lagoon pollution caused by urban wastes;
- A number of State institutions play a part in environmental conservation (besides the Ministry of Environment, Construction and Town Planning which has the global responsibility);
- Role of NGOs is becoming bigger and bigger in raising public awareness;
- A number of regulatory texts exist, relating to industry, forestry and water resources. But they are obsolete and little enforced. (The veritable shortcoming comes from enforcement difficulties in relation to socio-economic contingencies);
- Emphasis of the role of women in development and environmental actions; (pp 81-84)
- Development of livestock breeding programmes since 1975. Livestock grew by 6% annually. (Bovine cattle increased from 465,000 in 1975 to 922,000 in 1985, while poultry production went up 12.6% per year, and egg production by 16.5% per year);
- Proposal to create 400 equipped centres for drinking water and 13,575 water points.

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

Some of the recommended corrective measures:

Forestry:

- Establishment of a Land Tenure Code and Environmental Code;
- Involvement of local organizations in forest management (especially surveillance);
- Afforestation programmes;
- Combat poaching;
- Stabilization of agriculture and animal husbandry;
- Delineation of protected forests;

Fisheries:

- Periodical bans on fishing;
- Protection of fry through the use of better fishing equipment;
- Augmentation of fishing nets;

These measures, whenever respected, have often enabled productivity to go up in areas where it had dropped.

Livestock breeding:

- Accelerate the creation of dairy school-farms;
- Use agro-industrial by-products for animal feed;
- Use animal waste as fertilizers and encourage its utilization in agriculture;
- Protect national production by a taxing imported meat. This tax could constitute a fund for developing livestock breeding.

- Improvement of housing policy and means;

- Industry, transport and environment:
 - Reduce industrial pollution (between now and 1992) by about 70% in the big industrial areas;
 - Consider industrial risks and security for workers and for those who live in the vicinity of industries;
 - Consider the rational utilization of raw materials and especially save on water resources;
 - Promote the utilization of less polluting technologies and recycle by-products and industrial wastes;

- Enforce legislation;
- Continue and strengthen training of personnel;
- Ensure information for industrialists, people's representatives and for the public;
- Promote "clean" technologies;
- Encourage research programmes;
- More involvement of women in environmental programmes;

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

- Afforestation: For ten years, SODEFOR (Société pour le Développement des Plantations Forestières) has been receiving aid from the World Bank, France's CCCE, etc. which, together with the Côte d'Ivoire's Government, finance plantation and development projects on Government estates. (p 30)

- Sanitation: The World Bank and the European Investment Bank are financing a programme to improve Abidjan's environment, whereby collected waste waters will be directed into the sea, at more than 1,000 meters from the coast; the project will end in 1993. (p 35) USAID, KFW and other donors are financing waste management projects in other communes. (p 37)

- Local administrations are not in a position to finance investments in waste management projects; the needs of inland towns are considerable (estimated at 240 dust-carts, 50 multi-dust-carts and 900 dustbins, p 37)

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

The promotion of "clean technologies" is one of Côte d'Ivoire's objectives in fighting industrial pollution. (p 52)

7. INTERNATIONAL COOPERATION

- See Financial Arrangements and Funding Requirements;
- Côte d'Ivoire is party to a number of environment related international agreements and conventions;

8. EXPECTATIONS FROM UNCED

No mention

9. TABLE OF CONTENTS FOR REPORT

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CYPRUS

Full Title: National Report of Cyprus
Date of Report: June 1991
Version: Final
Original Language: English
Other Language(s): -
Total Pages: 48 plus Addendum "Women in Sustainable Development"

National Contact Address: Ministry of Agriculture and Natural Resources
Nicosia, Cyprus

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1. DRAFTING PROCESS

National Committee: Editors & Authors:

The foreword is signed by the Minister of Agriculture & Natural Resources, Mr. Andreas Gavrielides, who is Chairman of the Cyprus Council for the Protection of the Environment. The National Committee was comprised of individuals representing the Ministries and organizations listed under (b) and (c). (see Appendix I).

Other Ministries and Government Agencies:

Representatives of the following Ministries and Departments assisted in the preparation of the report:

Department of Fisheries; Department of Forests; Land Consolidation Department; Ministry of Labour & Social Insurances; Planning Bureau; Ministry of the Interior; Ministry of Commerce & Industry; Environmental Conservation Service (administered by the Ministry of Agriculture & Natural Resources).

NGOs, Grassroots Organizations and Public Involvement:

The following assisted in the preparation of the National Report:

Forestry Department, FAO; Union of Cyprus Municipalities; Environmental Committee of Limassol; Cyprus Association for the Protection of the Environment; Municipality of Nicosia and a businessman representing the private sector.

2. PROBLEM AREAS

- Air pollution and noise from motor vehicles is becoming a problem during rush hours;
- Local air pollution sometimes occurs around industrial or mining plants;
- Rainfall is irregular and unequally distributed;
- Coastal aquifers are subject to over-pumping, resulting in sea intrusion; further, sewage and industrial effluent are beginning to affect inland aquifers;
- Only the capital city, Nicosia, has a central sewage system and treatment plant; as a result, sewage disposal pits have contaminated certain aquifers with nitrates;
- Marine pollution from pesticides (in the form of run-off from the land), together with microbial pollution, petroleum hydrocarbons and dispersants for combating oil, are all endangering marine resources;
- Marine habitat destruction occurs with illegal trawling in shallow waters, by the dumping of dredged material by barges and by land-based outlets of industrial and mining waste; tourism development also has negative impact on habitat;
- Extensive use of agrochemicals degrades the soil;
- Erosion of bare lands occurs as a result of heavy rainfall;
- Agricultural land is being lost to tourism development;

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

- Monitoring of marine pollution is actively pursued;
- Commercial fisheries are managed on a sustainable yield basis;
- Refuse collection services are provided to ships in main ports;
- Parks and reserves have been established for the protection of plant and animal species;
- The Town and Country Planning Law of 1972, which came into full effect in 1990, helps to safeguard the coastal zone from tourism development;
- In 1985, the Planning Bureau issued a directive requiring all government development projects to include an environmental impact assessment;
- Legislation aimed at protecting the environment is under preparation (existing laws are listed in Appendix II of the full report);
- A number of reports on environmental issues were prepared by local and foreign experts, including the "Cyprus National Report on Issues Relating to Sustainable Development" (1989);

- Action Plan for the Control of Industrial Pollution (approved by the Council of Ministers in 1990);
- 9-month programme was launched in March 1991 aimed at strengthening environmental awareness;
- "Environmental studies" has been introduced into the school curricula;

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

- Improvement of living conditions and social services, with special emphasis on health, education and housing;
- Strengthening of the existing institutional structure for environmental protection;
- Strengthening of environmental awareness by training teachers in environmental subjects and by using the mass media for an environment publicity campaign;
- Reformulation, completion and codification of environmental legislation;
- Conservation of the natural environment, including effective management of wildlife resources: emphasis will be placed on the Akamas region, Cape Greco and Liopetri River areas;
- Prevention and control of pollution by: identifying polluting sources; formulating regulations for emissions; strict monitoring of potential sources of industrial pollution; reducing of the lead content of petrol; implementing sewerage schemes in Limassol and Ayia Napa; creating safe storage areas for toxic chemicals;

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

- World Bank, EEC, UNDP and European Investment Bank are financing the Environment Programme for the Mediterranean, which benefits Cyprus through the Mediterranean Technical Assistance Programme (METAP);
- Programmes on the management of the Akamas National Park, on environmental information and monitoring and on the management of wildlife habitat have been proposed for the 1991 METAP Programme;
- The Turtle Conservation project and the "Laona Project" receive funds from the EEC through the MEDSPA programme;
- UNHCR financed the purchase of fire-fighting equipment and the construction of forest roads and firetraces (1990); FAO helped finance a Remote Sensing Centre;
- Under the 1989-1993 Development Plan, special provision is made for the financing of projects on the environment;

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

- Technological innovations have been made in the solar water heating industry

7. INTERNATIONAL COOPERATION

- Projects carried out by UN agencies include: a survey of industrial contamination (UNIDO, 1974); a study on organizational aspects of environmental management (UNEP, 1978); a study on legal and institutional matters (UNEP, 1983) and (UNEP, FAO and HABITAT, 1984); workshop on environmental planning and management (UNEP, UNDP); project to expand national capacity to plan and manage the basic environment resources (UNDP, 1987); Assessment of Environmental Problems Associated with Quarrying and the Mining Industry (UNEP); "Environmental Planning and Management: Air Pollution" (UNDP, ECE, begun in 1989);
- Within the framework of the Mediterranean Action Plan, Cyprus participates in the Priority Action Plan, in pollution monitoring and research, in the combating of oil pollution emergencies and in setting up specially protected areas;
- Bilateral project with Germany on "Groundwater Exploration and Soil Resources";
- Joint project for technical cooperation with Germany on monitoring and control of industrial pollution in Cyprus;
- "There is room for the transfer of technology by training in the fields such as recycling of wastes and materials and nature conservation";
- Transfer of technology to less developed countries: provision of know-how on solar water heating systems to Seychelles; UNDP-sponsored delegation from Afghanistan visited Cyprus to study renewable sources of energy;

8. EXPECTATIONS FROM UNCED

It is hoped that outputs of the Conference will include:

- a declaration or "Earth Charter" embodying basic principles governing economic and environmental behaviour;
- a blueprint for action in all major areas affecting the environment and development;
- recommendations for the means, especially financial resources and necessary technologies, for the implementation of Conference decisions for developing countries;
- approval of draft conventions on climate change, biological diversity and forest conservation;
- strengthening of national and international bodies to ensure implementation of decisions and recommendations.

The Conference is invited to address the following issues: protection of the atmosphere; protection of land resources; conservation of biological diversity; protection of freshwater resources; protection of marine resources and the improvement in the quality of life and human health.

The report also stresses the importance of: the eradication of poverty; environmentally sound management of biotechnology and hazardous wastes; the prevention of illegal traffic in toxic products; issues of debt in developing countries; the recognition of the useful role of NGOs and the provision of funds and technology to developing countries to enable them to integrate environmental concerns into their development programmes.

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DJIBOUTI

<i>Full Title:</i>	Rapport National Environnement, Djibouti 91
<i>Date of Report:</i>	November 12, 1991
<i>Version:</i>	Final
<i>Original Language:</i>	French
<i>Other Language(s):</i>	-
<i>Total Pages:</i>	105
<i>National Contact Address:</i>	Secrétariat Technique du Comité National pour l'Environnement ONTA/SPSE Djibouti, République de Djibouti
 <i>UNDP Contact Address:</i>	 UNDP Resident Representative B.P. 2001 Djibouti, République de Djibouti Tel: (253) 35 33 71 Fax: (253) 35 05 87

1. DRAFTING PROCESS

National Committee: Editors & Authors:

The report was drafted by the National Committee for the Environment, chaired by the Prime Minister, who is also in charge of Planning and National Development.

Other Ministries and Government Agencies:

The National Committee was assisted by the Technical Committee for the Environment, chaired by a technical advisor. Within this technical committee an editorial committee composed of nine persons provided complementary technical knowledge in such fields as national development, environment, tourism, research, animal husbandry, agriculture, forestry and education.

NGOs, Grassroots Organizations and Public Involvement:

A number of individuals from various fields provided information. Technical assistance was given by members of ONTA/SPSE (Office National du Tourisme et de l'Artisanat/Service de la Protection des Sites et de l'Environnement). UNSO, through UNDP, provided technical and financial assistance as well as environmental expertise. The Mission Française de Coopération et d'Action Culturelle also provided technical expertise.

2. PROBLEM AREAS

- Rapid urban population growth occurs without sufficient development of institutional and financial means. Technical and architectural improvement of existing housing facilities represents investment amounting to DFr. 50 billion or approximately US\$280 million (US\$1 = DFr. 177 as at January 1992) (p 13);

- The health system is badly hit by the unstable situation in the Horn of Africa as it has to take care of a big foreign population coming from neighbouring Somalia and Ethiopia (p 18);
- Utilization of wood as fuel exhausts the already limited forest resources (p 46);
- Agriculture is hindered by rising salinity in surface wells and hydraulic soil erosion aggravated by abusive deforestation (p 50);
- Degradation of the vegetative cover through overgrazing, deforestation for firewood and the extension of agriculture (p 59) results in soil erosion (p 62);
- Sedimentation of coral reefs (p 65); chronic pollution of the port by hydrocarbons, nautical tourism and sports, anchor chains are also factors of the degradation of the coral reefs (p 67);
- In spite of a law prohibiting hunting (March 1971) land and marine fauna is threatened because of poaching, capture and trade (p 67);
- In areas with inadequate urban waste management, mortality rates within the 0-5 age group are 20% and 11.5% in the 0-1 age group (p 69).

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

Two protected natural sites were created by decree:

- le Parc Territorial de Musha in 1972 (decree No. 72-1363/SG/CG);
- la Réserve Intégrale de Maskali sud in 1980 (decree No. 80-062/PR/MCTT).

A national park, the Parc National du Day is to be created (pp 48 & 49).

Within the framework of the Rural Development Project (PDR) the Government assists private enterprise in agricultural development. The project, initiated in 1981, especially gives logistical support and supplies inputs to horticulturists (p 50).

The Government, with external financial support, has introduced several development programmes in the fisheries sector aimed at, among others:

- training fishermen;
- the elaboration of a coherent legal framework, constituting the future Fisheries Code, to complement the Code of Maritime Affairs;
- the improvement of reception and processing conditions for sea products (p 56).

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

Environment - development:

- improvement of the productivity of the primary sector (promotion of the private sector, enhancement of human resources);
- economic and rational management of rare natural resources (water, arable land);
- combat deforestation and improve management of grazing land;

- conservation of species and ecosystems;
- combat marine and land pollution;
- urban hygiene and quality of life.

Capacity building:

- strengthening of institutions;
- education and raising awareness among all social groups;
- evaluation of natural or man-made resources;
- training;
- legislation;
- other environmental initiatives (e.g., encourage nomadic people to settle down for easier management of available natural resources).

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

In 1988, public aid to Djibouti amounted to US\$109,264,000, 14.9% higher than in 1987. Bilateral aid, especially from France, remains dominant at 71% of the total. Loans come to less than 20% of the total amount and are mainly used in the sectors of transport and communications, energy, health, housing, agriculture and education (p 21).

USAID has funded research in utilization of wind power (p 47).

A number of projects in the animal husbandry sector have received financial assistance from France, the EEC and the Association Française des Volontaires du Progrès (p 55).

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

Energy:

- Geothermal power: drilling exploration resulted in four wells of 2,000 metres deep each. A development programme has been implemented;
- Development of wind power has been financed by USAID; rehabilitation of existing equipment received logistical support from the French army. A feasibility study carried out in 1980 by the Dutch group CWD has been revived and ISERST (Institut Supérieur d'Etudes et de Recherches Scientifiques et Techniques) has contacted this group so that they can produce a prototype of their CWD 2740-wind equipment, which is well suited to conditions in Djibouti;
- As regards solar energy, several installations have been carried out in the country by ISERST. Photovoltaic [PV] lighting and refrigeration systems have been installed in rural schools and dispensaries. Solar lamps have been distributed to individuals and PV water pumps installed in a number of areas (p 47).

7. INTERNATIONAL COOPERATION

- Djibouti's international environmental policy is based upon the principles defined by the international community and especially by the African countries (p 85);
- Djibouti adheres to the various principles identified by: CMED (Commission Mondiale sur l'Environnement et le Développement), the Dakar Resolution on Environment (May 1989), the Tunis Declaration and Plan of Action (April 1991), the Kampala Declaration and the Bamako Declaration;
- Djibouti's environmental strategy intends to take into consideration the nine themes of consideration proposed by UNCED;
- At the subregional level, national environmental programmes will incorporate the principles of the Strategy drawn up by IGADD (Intergovernmental Authority on Drought and Development) (pp 86- 87).

8. EXPECTATIONS FROM UNCED

No specific mention

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EGYPT

Full Title: National Report on Environment and Development
Date of Report: September 1991
Version: Final
Original Language: Arabic
Other Language(s): -
Total Pages: 267
National Contact Address: Egyptian Environment Affairs Agency (EEAA)
 Zamalek, Cairo

UNDP Contact Address: UNDP Resident Representative
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1. DRAFTING PROCESS

National Committee: Editors and Authors:

A group of seventeen experts took part; final drafting: nine experts.

The foreword is signed by the Minister of Cabinet Affairs and Minister of State for Management Development, Dr. 'Atef Mohammed 'Ebeid

Other Ministries and Government Agencies:

Twenty-five were involved: the Ministry of Agriculture and Land Reclamation, the Ministry of Industry, the Ministry of Petroleum and Mineral Resources, the Ministry of Electricity and Energy, the Ministry of Transport, the Ministry of Reconstruction, the Ministry of Finance, the Ministry of Health, the Ministry of Manpower, the Ministry of Interior, the Authority on Environment and several other bodies.

NGOs, Grassroots Organizations and Public Involvement:

Numerous non-governmental organizations participated in the drafting process.

2.. PROBLEM AREAS

- Urban encroachment on agricultural lands;
- Industrial concentration in some areas with the ensuing problem of solid, liquid and gas waste due to overcrowding and an overworked drainage system;
- Dumping into the Nile, the Mediterranean or the Red seas leading to their pollution;
- Oil pollution is a source of concern;
- An exaggerated use of agricultural chemicals leading to soil degradation as well as threatening life-systems;

- Scarcity of traditional sources of energy;
- Rising demographic pressures with diminishing water resources and the threat of desertification;
- An excessive use of chlorofluorocarbons with impact on the ozone layer; the consequences of which can be detected in industry, agriculture and health;
- An added problem is the high cost of alternatives.

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

- A current water policy on the rational use of water resources;
- Numerous laws on the protection of water resources especially the Nile waters against pollution as well as guidelines on dumping into the Nile;
- Current projects on ensuring safe drinking water and proper drainage;
- Various laws on safeguarding natural parks, ensuring occupational safety, protecting against pollution of air, water and irrigation networks;
- A plan of the Environment Research Council to protect the Nile, fish stocks, and the marine environment i.e. polluted coastal areas due to oil leakage;
- Ongoing projects on environment and health, afforestation and green belt areas;
- A comprehensive plan set up by the petroleum industry to cope with cases of oil pollution;
- An internationally funded remote-sensing research centre with a monitoring network on radioactivity, set up under Egypt's emergency plan, with a mobile unit as to measure and evaluate pollution.

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT and DEVELOPMENT

- Linking of environment legislation and development planning;
- Monitoring the Nile waters, especially after the construction of the High Dam, as well as treating its polluted waters;
- Limiting the exaggerated use of agricultural chemicals so as to safeguard the ecological balance, improve soil quality besides developing irrigation and drainage systems;
- Planning land use with a view to overcoming demographic pressure, desertification and soil degradation;
- Setting up a programme for sound waste management with recycling as one of its core concerns;

- Monitoring levels of air, water, food and soil pollution through reinforcing environment monitoring networks as well as promoting the use of environmentally friendly alternatives such as biomass, wind and solar energy;
- Promulgating legislation on the protection of the environment as well as regulations on the use of drainage networks in tourist installations;
- Conservation of the cultural and natural heritage;
- Preparing a map of natural resources, the aim of which would be their rational use;
- Developing urban and rural human resources and improving occupational safety;
- Increasing awareness of environmental issues through reinforcing the role played by educational institutions, mass media and NGO's;
- Concluding new agreements with foreign companies for the discovery of oil and natural gas with a safeguard clause for "environment impact studies" inserted.

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

- Need for international funds in the field of environmental teaching and instruction;
- Need for more material and technical support in the implementation of a national programme on afforestation and the setting up of green belt areas.

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

- The Electricity and Energy sector is currently developing a policy focusing on an extended use of new and renewable sources of energy as well as increasing available natural gas so as to constitute 5% of the country's total energy needs by the year 2005; environmental laws stipulate that stations be committed to controlling the emission of hazardous gases in the process of fuel burning.

7. INTERNATIONAL COOPERATION

Egypt is participating in various regional, international conferences and symposia on environment and development, bilateral cooperation undertaken with different countries like USA, Canada, Japan, France, Germany. EC Regional cooperation is also established through the Arab Fund for Social and Economic Development. Collaborating with both the UNESCO and UNEP in the field of teaching environment-related subjects. Cooperation between the Academy of Technology and Scientific Research and the International Disaster Office in the implementation of the disaster relief project launched since 1987 in Egypt. Points of contact set up between the national network on monitoring water pollutants and the plan for the protection of the Mediterranean Sea against pollution (Blue Plan).

8. EXPECTATIONS FROM UNCED

- Inviting world leaders interested in environment to reinforce development and environment as a basis for sustainable development, coordinating regional and international efforts through UN agencies and financial institutions, preparing international legislation on environment, under the auspices of the UN, increasing regional cooperation through the launching of joint projects so as to increase available funds and control possible sources of pollution, need for more international cooperation on sound management of solid and hazardous wastes and reused water, establishing a code of honour as a protection of the environment and its resources as well as addressing the problem of dumping hazardous wastes in the Third World.
- Encourage environmental impact assessment as part and parcel of all socio-economic development projects, expanding the use of new and renewable sources of energy as well as waste recycling, extending the rational use of available resources (such as water, energy etc). Reinforcing national capacities through international research and strengthening the role played by NGO's in monitoring the information network on development and environment; releasing more funds through the alleviation of Third World debts and the establishment of an international fund to be financed by different sources according to everyone's capacity so as to cover any activities in the field of development and environment.

9. TABLE OF CONTENTS FOR REPORT

Foreword by Dr 'Atef Mohammed 'Ebeid
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- Background information
- Resources and the scope for development
- The state of the environment in Egypt
- Strategies and proposals for sustainable development
- Conclusion
- Annexes

Part 2: Detailed report

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Chapter 2:	Resources and the environment
Chapter 3:	Responses to development and environment issues
Chapter 4:	Planning for sustainable development
Chapter 5:	Plan of action: Strategies and Recommendations

FIJI

Full Title: United Nations Conference on Environment and Development. Republic of Fiji National Report.
Date of Report: July 1991
Version: Final
Original Language: English
Other Language(s): -
Total Pages: 129
National Contact Address: Ministry of Housing and Urban Development

UNDP Contact Address: UNDP Resident Representative
 Private Mail Bag, Suva, Fiji
 Tel: (679) 312500 Fax: (679) 301718

1. DRAFTING PROCESS

National Committee: Editors & Authors:

Technical assistance received for preparation & editing.

Report developed under the auspices of a UNCED Committee acting as a sub-committee to the National Environmental Steering Committee. Most material was obtained for the preparation of the State of the Environment Report by the National Environment Management Project. The report was endorsed at the Fiji Interim Government Cabinet meeting on 23 July 1991. Foreword signed by the Minister of Housing and Urban Development, Mr. Tomasi Vakatora.

Other Ministries and Government Agencies:

- Foreign Affairs
- Finance and Economic Planning
- Primary Industries
- Fijian Affairs and Rural Development Education
- Health
- Lands and Mineral Resources
- Tourism, Civil Aviation and Energy
- Infrastructure and Public Utilities
- Solicitor-General
- Conservator of Forests
- Women and Culture
- Town and Country Planning
- Native Land Trust Board
- Ports Authority
- National Trust

NGOs, Grassroots Organizations and Public Involvement:

No mention but the editors acknowledge "the numerous individuals and organisations who contributed".

2. PROBLEM AREAS

- Environmental unit lacks resources; set up in 1989, it has only one specialist.
- Current community environmental awareness is at a low level.
- Urbanisation trends place pressure on infrastructure (housing, water, sanitation), resulting in waste disposal problems and increasing pressure on peri-urban marginal agricultural land.
- Global warming: concern over the coastal zones; moderate to severe impacts, some local devastation; major changes in crop production, demographic patterns and social infrastructure. With rising sea level, reef protection from storms may diminish.
- Wealth distribution: even though Fiji is placed in the "self-sufficiency" category by the Australian International Assistance Bureau, 15% of households were at risk of not having sufficient income to purchase a basic nutritious diet. About 31% of earners receive 76% of total income (p 41).
- Soil erosion: The problem occurs in Fiji but there is little quantitative data available. Soil erosion and land degradation are "the visible manifestation of profound social issues", such as the land tenure system. Increased planting on steep slopes is a possible cause for concern. Reef sedimentation is, in certain locations, a serious concern. Logging-induced erosion has occurred, damaging water supplies of two major towns.
- Possible agricultural expansion into marginal lands.
- Land use conversion: Small but steady loss of agricultural land to non-agricultural land use.
- Land tenure: The lack of long term security of tenure leads to little incentive to improve the land quality or to strive towards sustained yield.
- Pesticides: about F\$1,900,000 (approximately US\$1.27 million at July 1991 exchange rates) worth of pesticides are imported. While controls exist (see section 7 above) there is a lack of checks and surveillance.
- Poor sewage disposal from septic tanks, owing to groundwater logging, results in sewage seepage into Suva's creeks.
- Solid waste: Virtually all urban areas have problems with solid waste disposal sites - leaching into rivers has occurred. Litter is also a problem (regulations have recently been introduced).
- Recycling: There is very little recycling (beer and soft drink bottles only).

- Industrial Pollution Control: High pollution industries are not present; but, in the absence of direct regulations and monitoring (air and water), there is a lack of data on pollution type and extent (p 84).
- The sugar industry produces cane waste water and toxic chemicals (p 85). The fish canning industry also causes biological waste, which is discharged directly into the sea but does not appear to cause significant oxygen depletion.
- Water availability: Some areas experience fresh water shortage; government provision to remote areas is costly, often because of the use of water tanks.
- Ecological Knowledge: High endemicity of species, but floristic diversity poorly known (need for detailed studies). Mangroves and inshore marine habitats require further research.
- Deforestation: "moderate but continuing". There are four causes: large scale commercial agriculture/rural development projects; small holder mixed commercial and subsistence agriculture; spread of settlements, urbanisation and related infrastructure; and fire. (Need for sound planning, legislation, guidelines and increased education/awareness.) There is almost a complete loss of certain forest types. Many smaller islands have suffered severe deforestation.
- Logging: The Forestry Department has no "applicable" monitoring system. Current logging is causing "a great deal of avoidable environmental damage". Logging operations are felt to be "totally unacceptable" (p 58). Damage is caused by (i) mandatory extraction of a large number of species down to 35 cm; (ii) insufficient control of operators; (iii) inexperienced and badly equipped contractors; (iv) uncontrolled "secondary" logging.
- Environmental Impact Assessment: There is a general need for more use of EIA techniques.
- Traditional controls: By defining coastal resource allocation, customary fishing rights are a necessary part of sustainable management of molluscs, crustaceans and shells. Fisheries are being undermined by poachers, making long term management difficult. Better management is necessary involving improved information, marketing systems and the marine farming of trochus shells and pearls and seaweeds.
- Water quality is generally good, but water problems in rural areas may include (i) lack of quality control; (ii) insufficient quantity (iii) inadequate maintenance; (iv) lack of funds for installation/maintenance (v) lack of local technical expertise.
- Contamination of groundwater from sea water intrusion is a major threat; causes include over-pumping.
- Tourism has caused some problems: loss of traditional ecological values, ecological damage from resort construction, disruption of coastal processes, increased water demand from fresh water lenses, waste disposal.
- Gold Mining: potentially serious hazards include atmospheric sulphur dioxide release, tailing pond effluent (suspended solids and cyanide pollution of rivers) and the failure of old tailing dams.

- Sand and coral mining for cement making: EIA undertaken or monitoring carried out. Concern focuses on sedimentation to surrounding habitats, change in water circulation, changes in the marine food resources.
- Protected Areas: The status of Fiji's parks are not internationally recognised since they lack sufficient management and development.
- Exotic introductions are a serious threat to Fiji's island endemics.

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

- The National Environmental Management Project: (Commenced 1990, two year duration). A major outcome will be the formulation of a National Environment Strategy.
- Environment is represented in recent national development plans (since 1976), but enactment and implementation are necessary. At least 25 Acts are related to environmental management.
- Inter-ministerial Environmental Management Committee has been operating since 1980, but it is felt that a higher-level body is now required.
- Pesticides: Some control exists on importation, labelling, sale and use. The Pesticide Act limits sale unless the pesticides have been registered on the Fiji Pesticide Register (p 92).
- Government Borehole Subsidy Scheme which replaces/supplements hand-dug wells with tanks.
- A Natural Forest Research Inventory is currently under way through a Fiji-German Forestry Project.
- Adoption of a national code for logging practice (enforcement necessary).
- The Fiji Fisheries Division fish marketing system is regarded as one of the most comprehensive in the Pacific, but it could be further improved.
- Aquaculture development places emphasis on low capital & low technology methods. Aquaculture is seen as a means to feed a growing population, but EIA is necessary to avoid/lessen environmental problems.
- Tree Plantation establishment programmes: These have proved to be highly successful, particularly in the higher dryer zones, allowing afforestation of degraded grasslands.
- Water supply; "Considerable resources have been allocated to the provision of clean safe water".
- Electricity: Efforts to provide electricity have resulted in 43 % of households being connected to the grid.
- Establishment of a National Oil Pollution Committee and national oil pollution contingency plan.

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

The report states "it is considered premature to make specific recommendations" in order not to pre-empt the National Environment Management Project.

As part of the NEMP, the following have been undertaken as priorities:

- Evaluate and collate sector studies;
- Highlight and evaluate areas of critical natural resource importance;
- Present a preliminary assessment of environment, resource management, use and degradation problems;
- Prepare a State of the Environment Report;
- Define criteria for Ecologically Sensitive Areas (ESAs); identify sites and possible management plans;
- Assess legislative needs;
- Review and initiate monitoring programmes;
- Develop a public awareness and information programme.

Additional ad hoc recommendations include:

- Pesticides: establishment of a Pesticide Committee & appointment of inspectors; licensing of distributors and dealers; improvement of analytical facilities; improvement of liaison with customs; training of the registration officer. (Recommendations formulated by the Pesticide Sector Review but not yet carried out).

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

- No indication of how much financial assistance is required to implement environmental planning.
- The value of grants and aid in kind received in 1991 was F\$45.1 million (approximately US\$30 million at July 1991 exchange rates). Aid contributed 7% to Government expenditure and was 3% of GDP. Fiji has preferential trade access to markets including the EC.
- Tourism provides 74% of foreign exchange earnings and 30% of paid national employment.
- The National Environment Management Project is assisted by funding from an Asian Development Bank grant (see sections 7/9).

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

- Some interest shown in "energy alternatives" but commitment is small.
- There has been limited interest in developing small scale electricity generation utilising biomass fuels.
- Hydro-electricity: Monosava Hydro scheme generates 80MW. The scheme has resulted in major environmental and economic benefits, including savings on petroleum imports. In addition, there are some small hydro-electric plants.
- Solar energy: High cost of photovoltaic systems is a constraint; the Government has subsidised many of those installed. Of the 350 Government-installed systems only limited success reported. Solar heaters are common in urban areas.
- Fiji makes relatively good use of biomass energy: bagasse and wood waste from sawmilling.
- Wind: wind pattern constraints, such as hurricanes, make wind power marginal.
- Geothermal: No evaluation provided.
- Ocean based energy is not yet proven; investigations under way are supported by the Norwegian Government.

7. INTERNATIONAL COOPERATION

Fiji is an active member of the South Pacific Regional Environment Programme (SPREP). Fiji has also participated in regional environmental meetings organised by ESCAP. Interaction between the Government and donors has resulted in the building of environmental assessment into projects. An effort has been made to translate International Conventions into action. The report lists 10 conventions to which Fiji is party.

8. EXPECTATIONS FROM UNCED

No specific mention

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FINLAND

Full Title: National Report of Finland to UNCED 1992
Date of Report: 1991
Version: Final
Original Language: English
Other Language(s): -
Total Pages: 137 plus 1 annex
National Contact Address: Ministry for Foreign Affairs
or
Ministry of the Environment
Helsinki, Finland

UNDP Contact Address: N/A

1. DRAFTING PROCESS

National Committee: Editors & Authors:

The background work for the national report was done by two independent consultants hired by the Ministry of the Environment.

The National Committee is chaired by Mr. Paavo Väyrynen, Minister for Foreign Affairs. Ms. Sirpa Pietikäinen, Minister of the Environment, and Mr. Toimi Kankaanniemi, Minister for Development Affairs acted as Vice-Chairmen.

The report reflects the views of the Ministry for Foreign Affairs and the Ministry of the Environment.

Other Ministries and Government Agencies:

The Finnish National Committee for UNCED, composed of representatives of various government agencies and NGOs from both environment and development organizations, contributed substantially to the drafting of the report.

NGOs, Grassroots Organizations and Public Involvement:

The Finnish Association for Nature Conservation (SLL), Nature and Environment and 14 other NGOs gave their comments on Finland's report. Furthermore, the Confederation of Finnish Industries also expressed their views.

2. PROBLEM AREAS

- Emissions from fossil fuel combustion damage the equilibrium of natural systems;
- Hydropower schemes may have a negative impact on the environment, diminishing fish stock and leading to a deteriorating water quality;
- Peat harvesting has adverse consequences on natural habitats;

- Monocultural farming and heavy mechanization diminishes soil productivity;
- Fur farms burden watercourses with ammonium and nitrogen emissions which have a negative impact on forests;
- There are too many small landfills in waste management;
- Problems arising from the transport sector include exhaust gases, noise, dust, oil spills during transport and solid waste as scrap vehicles;
- Acidification of fresh waters and the soil poses a threat to forests and to the quality of water which is compounded by run-off contaminated by fertilizers and pesticides;
- Eutrophication of shallow surface waters and the Baltic Sea;
- Heavy metal contamination of water occurs in the Gulf of Bothnia;
- Soil erosion occurs on grazing lands;
- Some 2.6 million hectares of forestry land are not exploited economically;
- Climate change and global warming pose an indirect threat to forests;
- Habitat changes constitute a major threat to endangered species.

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

- Introduction of the Polluter Pays Principle requires offenders to pay pollution abatement costs;
- Several acts were promulgated, including the Air Pollution Control Act of the 1970s which introduced particle collection devices, the Private Forestry Act prohibiting the destruction of forests, the Nature Conservation Act of 1923 establishing various natural protected areas on both state-owned and privately-owned land;
- Other acts include the Rapids Protection Act which prevents the construction of power stations on such sites and the Hunting and Fishing Acts which cover the exploitation of game animals and fishing;
- A new act was passed in 1990 to regulate reindeer populations through reindeer owners' associations, organizations of agricultural producers and the Ministry of Agriculture and Forestry;
- The New Chemicals Act stipulates advance approval procedures for new substances and wood preservatives;
- Public authorities issued stringent guidelines on the use of sewage sludge in agriculture;
- The Finnish Council of State issued targets for 1995 on water pollution control, and new guidelines were issued in 1988 for environmental protection in industries by the Confederation of Finnish Industries;

- Ten rescue plans have already been approved whilst another 100 plans are currently being prepared for the protection of endangered species. Moreover, total expenditure for biodiversity conservation amounted to US\$29.7 million in 1990;
- A uniform Criminal Code is currently under discussion, incorporating all environmental offenses;
- Nearly every municipality of the 460 municipalities in Finland has a special organism for environmental protection (pp 77-82);
- An Expert Body of Biotechnology and Genetic Engineering is to be established in the near future; its aim is to coordinate the activities of various legislative and supervisory authorities as well as to update the guidelines on the use and release of GMO's (genetically modified organisms);
- In vocational training institutions, the integration of environmental education in the teaching of specific subjects has been compulsory since 1987;
- The Geological Survey, the Finnish Forest Research Institute and the National Board of Waters and the Environment are among the most important state research institutes on environmental monitoring;
- An ad-hoc committee is currently investigating possibilities of stabilizing and reducing greenhouse gas emissions;
- Protected areas including national parks, strict nature reserves and peatland protected areas have been designated, focusing on areas of high biodiversity importance.

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

Energy economy:

The Energy Strategy Report of Finland, released in September 1991 by the Parliamentary Council for Energy Policy, stresses the need for coherence between the Finnish energy policy and the environmental agreements and conventions Finland has adhered to. The strategy proposal included the following emission reduction targets to be achieved by improved energy efficiency and new less polluting power production:

- reduction by 80% of SO₂ emissions from the 1980 level by the first years of the next millennium;
- reduction by 30% of the NO_x emissions from the 1980 level by the year 2000;
- stabilization of the CO₂ emissions and their reduction by the year 2000.

Industry:

Emphasis has been put on a holistic approach according to which environmental protection should be integrated in all activities of firms, leading to sustainable use of natural resources and to a minimum of adverse effects on the environment.

Other national objectives:

- Phasing out of CFC compounds by the end of 1994;
- A national target programme for water pollution control;
- A target programme for waste management.

Regional and global level:

- Finland hopes that new agreements on climate change and the protection of biodiversity will be ready for signature by the beginning of UNCED and that a decision will be taken to start negotiations on an international convention on forests;
- Finland supports the coordination of environmental activities in the UN system. Environmental objectives should be integrated into the activities of the specialized UN agencies and other organizations;
- The Economic Commission for Europe (ECE), too, can promote sustainable development through contractual arrangements. The Convention on Environmental Impact Assessment in a Transboundary Context was signed in Finland in February 1991. The Convention should be ratified and effectively implemented as soon as possible;
- In the process of European integration, the aim of the Finnish Government is to promote more stringent and more uniform environmental taxation and the development of European environmental administration;
- Finland has also been supportive of proposals aimed at duly observing the special needs of the least developed countries;
- Together with other EFTA countries, Finland has proposed that GATT integrate into its work programme environmental issues having an impact on trade;
- The European Economic Area (EEA) treaty, which is being negotiated, should include the principle that a high level of protection concerning health, safety and environment be considered as the basis for further development of rules;
- The Organization for Economic Cooperation and Development (OECD) should continue to assess the links between economic and environmental development and to search for cost-effective means of solving environmental and developmental problems;
- Finland has emphasized in various international fora that the goal of sustainable development should be given its due consideration. Finland and the other Nordic countries have, for example, taken the initiative to choose sustainable development as a permanent guideline for all the work of UNCTAD;
- Finland's own prospects for achieving sustainable development are highly susceptible to changes in her neighbouring countries. Consequently Finland must strive to ensure that the preconditions for sustainable development are established in those countries. This applies to the building of environmentally sound production technology and requires strengthening of the administrative capacity to cope with existing environmental problems. This is the rationale behind Finland's East European strategy. The strategy aims at promoting environmental conservation, in particular in the Soviet Union and Poland, and thereby at improving the prospects of these countries for achieving sustainable development;
- Baltic Region: The environmental cooperation of Finland with Estonia, Latvia and Lithuania will be strengthened and formalized as soon as possible;
- In 1989, Finland made a proposal for the promotion of sustainable development and sustainable use of natural resources in Arctic regions.

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

- Finland is currently supporting forestry and forest-industry development projects in over 20 developing countries, its annual expenditure amounted to some FIM 158 million (US\$40 million) for 1990;
- In 1989, total public expenditure on environment-related research has been estimated at about FIM 90-110 million (US\$23-28 million);
- Estimated environmental protective measures including waste management in industry, the reconditioning of contaminated soil and noise abatement will require investment of FIM 12 billion (US\$3 billion) in the nineties;
- Finland has provided funds to international environmental NGOs such as the WWF, PANOS Institute and the Centre for Our Common Future;
- Finland supported the setting up of the Global Environment Facility (GEF) in which the World Bank, UNEP and UNDP are the implementing agencies. Finland pledged FIM 105 million (US\$27 million) for 1991-93;
- Finland also supports the Ozone Layer Fund and the clearing house mechanism of the UNEP;
- In 1990, funds allocated to research amounted to FIM 74 million (US\$19 million), which was divided between international organizations and bilateral development cooperation.

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

- Use of CFCs to be prohibited by the year 2000, although the target is set at ceasing all use of CFC's by 1994;
- Annual regeneration is carried out on 200,000 to 250,000 hectares of forests out of which some 120,000 hectares are actually regenerated artificially;
- Logging has been developed as more ecologically and ergonomically sound machines and methods have been used;
- In 1988, about 85% of municipal waste waters have been treated by biological-chemical methods and another 13% by chemical methods;
- Adopting new processes and purification technologies have helped to reduce sulphur emissions in Finland by 50% in the 1980s;
- Biological activated sludge treatment plants have been constructed to reduce the discharge of organic material;
- Use of unleaded gasoline is being encouraged by taxing it at a lower rate than leaded grades, and catalytic converters on cars are being promoted;
- Waste paper and steel and iron scrap in metal industries are recycled;
- The deposit-refund system of soft-drinks, beer and alcohol bottles have high return rates.

7. INTERNATIONAL COOPERATION

(pages 96-113)

UN system:

Finland gives priority to sustainable development according to UN strategies and programmes. It considers that the improvement of developing countries' capacities to prevent environmental degradation is vital, and the monitoring and coordinating function of UNEP crucial. Finland's contribution to UNEP has been increased considerably.

Europe and the OECD:

Together with other Nordic countries, Finland recognizes the need to intensify endeavours in the field of environment as outlined in the Charter of the Paris Summit of the Conference on Security and Cooperation in Europe (CSCE).

The Economic Commission for Europe Convention on Environmental Impact Assessment in a Transboundary Context was signed in Finland. The Convention should be ratified and implemented as soon as possible.

Finland is actively involved in the formulation and enactment of more effective measures against air and water pollution as well as prevention of industrial accidents.

Together with the EFTA and EC countries, Finland is involved in the work of the European Environment Agency which, amongst other activities, includes establishment of joint activities and exchange of information.

Under the auspices of the OECD, Finland participates in various activities including the implementation of measures on traffic and the environment as well as the formulation of an environmental policy package for the Development Assistance Committee (DAC).

Finland and neighbouring countries:

In cooperation with the Nordic countries, a number of agreements have been concluded in areas such as oil pollution, nuclear power plants and other transboundary issues.

With the Central and Eastern European countries, where far-reaching economic and political reforms are under way, Finland's strategy includes specific budgetary and technological aid to support programmes, particularly in areas related to environmental improvement.

To protect the marine environment of the Baltic Sea area, various measures are being taken in addition to the 1974 Helsinki Convention. A high-level Task Force was established in 1990 to prepare a programme by early 1992.

A special cooperation programme has been designed for Estonia, Karelia and the St. Petersburg region and environmental cooperation will be strengthened with Estonia, Latvia and Lithuania.

Finland is one of the signatories of the Declaration on the Protection of the Arctic Environment.

Finland and development cooperation:

Finland's official development assistance is divided into two components, bilateral (40%) and multilateral (60%). Important sectors receiving aid include forestry, demography and basic services (primary education, primary health care, water supply and sanitation). Support for population control is channelled through UNFPA.

Financial aid is provided to international environmental NGOs such as the World Conservation Union, WWF, PANOS Institute, Centre for Our Common Future, Environment Liaison Center International and Fundación Ambiente y Recursos Naturales.

Finland supported the establishment of the Global Environment Facility (GEF), the Ozone Layer Fund and the clearing house mechanism of UNEP.

Together with other Nordic countries and EFTA member states, Finland initiated proposals to include environmental issues in international trade negotiations under GATT. It also played an important role in bringing environmental issues into the work programme of UNCTAD and OECD.

8. EXPECTATIONS FROM UNCED

Finland expects new agreements on climate change and the protection of biodiversity to be signed at the beginning of UNCED as well as a decision to be taken on the starting of negotiations on the international convention on forests.

UNCED should aim to achieve the following:

- A declaration of principles (Earth Charter);
- A programme of action reflecting the integration of environmental concerns into development;
- Agreements on transfer of technology and financial resources in which a clear political commitment should be made by all governments to allocate more resources to both development and environment;
- Strengthening UN institutions especially by reforming the economic and social sectors.

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ANNEX

FRANCE

<i>Full Title:</i>	Environnement et Développement: L'expérience et l'approche française
<i>Date of Report:</i>	July 1991
<i>Version:</i>	Final
<i>Original Language:</i>	French
<i>Other Language(s):</i>	-
<i>Total Pages:</i>	240 plus 2 annexes
<i>National Contact Address:</i>	Chargé de Mission Ministère de l'Environnement 14 bvd du Général Leclerc 92524 Neuilly-sur-Seine CEDEX, FRANCE Tel: (33-1) 47 58 12 12 Fax: (33-1) 46 40 75 47
 <i>UNDP Contact Address:</i>	 N/A

1. DRAFTING PROCESS

National Committee: Editors & Authors:

The Report was written by the Ministry of Environment.

Other Ministries and Government Agencies:

"Other relevant ministerial departments or public bodies" participated in the drafting process.
A consulting company, also provided assistance.

NGOs, Grassroots Organizations and Public Involvement:

A separate NGO report, entitled "Construire la Démocratie Internationale", is included. A note of warning in the latter says that the NGO report does not necessarily reflect everyone's views and is still subject to debate. It is signed by representatives of two NGOs, CLOSI (Comité de liaison des organisations de solidarité internationale) and CEDI (Comité d'environnement à dimension internationale). This NGO report was prepared as part of the observations that were presented at the World NGO Conference in Paris in December 1991.

2. PROBLEM AREAS

- Considerable damage occurs through natural disasters such as earthquakes (in the Antilles and in the South-East, Alsace, Pyrenees regions of metropolitan France), volcanic eruptions and cyclones (in the Antilles and Reunion Island), landslides and avalanches (in the Alps and the Pyrenees), floods in alluvial valleys, tempests throughout France, coastal erosion and tempestuous tides in littoral regions and forest fires (p 152);
- Whereas industrial pollution is decreasing, the Ministry of Environment remains concerned by pollution from motor vehicles which is on the increase (p 36);

- Development of coastal construction and the resulting equipment threatens the littoral environment (p 67);
- A number of problems affect water resources and their protection:
 - river water stagnation;
 - pollution from agricultural activities (two-thirds) and domestic and industrial wastes (one-third) (p. 88);
 - very weak protection of underground water sheets which provide drinking water;
 - accumulation of heavy metals and toxic substances in water sediments;
 - no separation between collecting and treatment networks of waste waters and rain water;
 - shortage of water in some zones of the country in times of recurring drought;
 - development problems in flood-prone areas (3.5% of the territory), where almost 4% of the population live (more than 2 million people) (p 60);
- Soil erosion occurs in big agricultural areas which, in some cases, cause frequent and serious mud flows and play a part in polluting rivers (p 86);
- Abandoning and desertification of unproductive rural agricultural areas;
- Concentration of national and international tourism in more and more congested areas (coast, mountains, lake shores) (p 182).

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

Atmospheric Pollution:

France has committed itself to reduce by 30% emissions of sulphur dioxide (SO₂), nitrogen oxides (NO_x) and of hydrocarbons through legislation and economic incentive instruments. These instruments include:

- A tax on air pollution (polluter-pays principle) instituted with effect from 1 July 1985 (p 32). The polluter-pays principle is also applied with regard to waste management, whereby the producer or holder of wastes is responsible for their elimination. Domestic wastes, however, are disposed of by local administrations and radioactive wastes are managed by the government (pp 126-127);
- Tax incentives to encourage corporate investment in non-polluting technology (p 129).

The Government also provides financial support for research that directly or indirectly concerns prevention of air pollution, development of techniques for reducing or measuring pollution and their propagation.

Energy conservation:

Periodical monitoring of the atmosphere by polluters (e.g. industries) or by appointed bodies.

Fresh water:

- The law of 16 December 1964 relates to the water system, its distribution and anti-pollution measures. Although unchanged since the sixties, recent research may lead to an amendment in 1992 (p 50);
- Norms of maximum content of phosphates in detergents were made more stringent (p 59).

Marine monitoring:

Since the seventies, monitoring operations have been carried out on the quality of recreational waters and on marine and littoral resources.

A law was promulgated relating to coastal protection and enhancement (3 January 1986) (p 69).

A policy is in effect of disseminating information and creating public awareness (p 71).

Solidarity with developing countries:

France believes that financial aid should be made available to developing countries to cover extra costs incurred by the protection of the world environment. France, together with Germany, strongly supported the creation of a Global Environment Facility within the World Bank.

France actively participated in the lobbying within the European Community and in the negotiations of the Fourth Lomé Convention, which was signed on 15 December 1989 and includes a significant section on the environment (pp 221-222).

Soil preservation and forestry policies:

Afforestation programmes exist since 1860 (p 85). The National Forestry Fund, financed by a tax on timber funds afforestation programmes, equipment and training of personnel. Its annual budget is about FF 500 million (about US\$82 million at the July 1991 exchange rate). Through the Fund, two million hectares of land have been afforested over a period of 40 years (p 93). Information and training programmes have been established since 1982 (p 87).

Biodiversity:

The law of 10 July 1976 concerns the protection of endangered species and prohibition of gathering and hunting these species. Reintroduction of rare species is carried out in some cases (pp 104 & 105).

A description of the many protected areas is provided on p 109.

At the international level, France has taken a number of initiatives in the field of conservation of endangered species:

- inclusion of the African Elephants as a protected species in Annex I of the Washington Convention;

- elaboration of a programme to protect seals in the Mediterranean Sea and the Atlantic Ocean through bilateral cooperation (p 110).

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

Eight principles of action were approved by the Government:

- 1) promotion of the quality of the environment as an element of economic competitiveness;
- 2) reduction of environmental costs through innovation and preventive measures;
- 3) more strict enforcement of legislation;
- 4) partnership with local organizations and decentralization of responsibilities, to integrate better the environment in society;
- 5) raising awareness to encourage rational decision making;
- 6) promotion of national and local technologies;
- 7) more strict enforcement of the polluter-pays principle and reduction of ecological inequalities;
- 8) international cooperation and especially France's contribution to the world's sustainable development, taking account of the interests of future generations and the specific situation of developing countries (p 22).

A global strategy must be established as soon as possible to limit the emission of greenhouse gases.

This strategy should be based on the following principles:

- economic efficiency and early action;
- initially greater responsibility and role of industrialized countries;
- participation of all the countries from the outset;
- equitable share of obligations between countries or big regions and fair terms of international trade;
- consideration of the specific situation of developing countries, both in terms of debt, funding requirements and technology transfer (p 40).

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

Regarding marine monitoring in France, financial aid is given to communes in question to fight water pollution (p 70).

Solidarity with developing countries:

- France's contribution represents about 1/4 of the total development aid dispensed by the EEC;
- France's own development aid amounted to more than 23 billion francs (about US\$3.8 billion) in 1989 or 0.54 % of its GNP. French bilateral aid amounted to 24.4 billion francs (about US\$4 billion) in 1989;
- Private aid, especially from international NGOs amounted to about 500 million francs (about US\$82 million);
- Finally, there has been an advance of "decentralized cooperation", based on international cooperation actions carried out at the initiative of territorial organizations, involving North and South populations (p 222).

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

In January 1990, with the collaboration of the motor industry, the Government launched a vast research programme on an environmentally friendly and economic car. This was the first coordinated programme to promote a global approach to the fuel/engine/anti-pollution system in order to reduce automobile emissions into the atmosphere. In addition, promotion of the electric car was revived in 1990 by the Ministry of Environment (p 36).

7. INTERNATIONAL COOPERATION

France emphasizes the importance of regional cooperation in dealing with environmental problems:

- institutionally organized regions such as the EEC, Council of Europe, ECE, CSCE;
- Eco-regions such as the Mediterranean Basin, the Atlantic-English Channel-North Sea littoral;
- cultural identity regions, i.e., French-speaking countries.

France also emphasizes the importance of strengthening cooperation between the North and the South while at the same time taking into account each country's specific problems (pp 218 & 223).

Air pollution:

A very big role is played by France within the EEC, OECD and the UN. It actively participates in the work of the Inter-governmental Panel on Climate Change (IPCC) set up by UNEP and WMO (p 37).

Radioactive wastes:

- Cooperation within the International Atomic Energy Agency (IAEA) or the Nuclear Energy Agency of the OECD;
- Within the EEC context, France actively participates in joint European research programmes, that are part of bilateral agreements with scientific and security organizations of various countries;

- ANDRA (Agence Nationale pour la Gestion des Déchets Radioactifs) and French industrialists exchange knowledge with various foreign partners. They intervene, under technical assistance contracts, in Spain, the United States, Japan and Hungary (p 128).

Chemical wastes:

France participates in the OECD voluntary cooperation programme which is aimed at studying 150 little known substances produced in large quantities and is also very active in the research work conducted within Europe (p 149).

In January 1991, the Office International de l'Eau (OIE) was created to complement supporting bodies in training and cooperation programmes (p 57).

8. EXPECTATIONS FROM UNCED

They are not specifically mentioned in the main report, but the following is taken from the NGOs' report:

- (a) Assert human rights to environment and development in accordance with the laws of the environment through:
 - new environmental legislation;
 - monitoring bodies.
- (b) Establishment of a global management system through economic policies of solidarity, by:
 - reviewing economic growth;
 - setting up of a solidarity fund;
 - enacting new trade rules;
 - implementing a research policy that responds to human needs;
 - adapting production to sustainable development.

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GUINEA

Full Title: Rapport National de la République de Guinée
Date of Report: October 1991
Version: Final
Original Language: French
Other Language(s): -
Total Pages: 128
National Contact Address: Ministère des Ressources Naturelles et de l'Environnement
 Conakry, République de Guinée

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1. DRAFTING PROCESS

National Committee: Editors & Authors:

The report was prepared by the National UNCED Preparatory Committee. It was published by the Ministry of Natural Resources and the Environment.

Other Ministries and Government Agencies:

The National Committee included representatives from the following:

- Ministry of Natural Resources and the Environment
- Ministry of Agriculture and Animal Resources
- Ministry of Planning and International Cooperation
- Ministry of Town Planning and Housing
- Ministry of Public Health and Population
- Ministry of Transport and Public Works
- Ministry of Information, Culture and Tourism
- Ministry of National Education
- National Directorate of Forestry and Hunting
- National Directorate of the Sources of Energy
- Secretariat of State for Energy
- Secretariat of the National Council of Environment
- Planning and Economic Development

NGOs, Grassroots Organizations and Public Involvement:

The National Committee also included representatives from one NGO, UNDP and FAO. An UNCED preparatory workshop was held, attended by 39 persons from government ministries and departments, NGOs and national and international institutions.

Financial assistance was received from UNDP and UNSO.

2. PROBLEM AREAS

- Illiteracy stands at 76 %;
- High rate of inflation;
- Very low per capita income;
- External debt (in 1990, external funding represented 82 % of the National Budget);
- Balance of payments deficit (US\$57.4 million in 1990);
- The national rate of population growth stands at 2.8% whereas in Conakry it stands at 6%. The high rate of population growth, a youthful population and rural exodus are serious factors in blocking the country's economic and social development. Migration has also occurred from neighbouring countries as a result of the war in Liberia and Sierra Leone during the past two years;
- Food security;
- Infrastructure (transport, telecommunications, sanitation, etc.) is inadequate qualitatively and quantitatively;
- The majority of the population - both rural and urban - derive their energy from wood and charcoal, contributing to uncontrolled deforestation and the ensuing degradation of the environment;
- The health system is characterized by a lack of qualified personnel and infrastructure as well as by time-worn equipment and poor hygienic conditions. There also exists an unequitable distribution of available human resources between Conakry, the capital, and the rest of the country. Thus, although Conakry's population stands at 19 % of the whole, it had 45 % of the country's doctors, 58 % of the pharmacists and 58 % of the midwives in 1986;
- Only 40 % of the urban population have access to drinking water;
- Degradation of the Fouta Djallon and of the high Niger basin, which are the cradle of water resources for a big part of West Africa;
- Over-exploitation of land due to overpopulation in certain areas;
- Degradation of forest resources, followed by the reduction of fauna, extension of bush fires, degradation of cultivated land, reduction or even extinction of forest products (fruits, fibers, medicines), loss of cultural heritage and identity linked with forests and hunting, and finally an accentuation of rural exodus;
- Waste management;
- Pollution of surface water by various wastes, especially during the rainy season. Sea water is polluted with mineral wastes and discharges from tankers and fishing boats.

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

In order to rehabilitate economic and social development, since 1984 the Guinean Government has progressively implemented legislative and institutional measures in the fields of environment and natural resources:

- The Environment Code mainly deals with land/soil (authorization to cultivate, set up an industry or construct; utilization of pesticides, fertilizers and other chemicals; implementation of soil protection measures, etc.). The Code also deals with forests in the chapter relating to fauna and flora. Two chapters of this Code deal with water;
- The Mining Code concerns:
 - the delimitation of security zones prohibiting exploitation;
 - the prior declaration of any drilling or exploration that is over five meters deep;
 - environmental and health considerations when contemplating new exploitation methods;
 - the use of explosives;
 - the re-developing of the site after exploitation for agricultural or forestry purposes.

With the adoption of the Fundamental Law in December 1990, the Government is now doing its best to bestow the country with political institutions that are capable of managing a free market economy in the respect of democracy and human rights.

A number of other legal texts are mentioned (pp 72-78).

The share of national investment devoted to the rural sectors (agriculture, animal husbandry, fisheries and forestry) has increased steadily until 1990 when it reached 29 % (p 99).

Programmes and Projects:

The rural development programmes (PDR-Guinée Maritime, PDR-Haute Guinée, PDR-Foutah Djallon) aim directly at improving the living conditions of the people.

The National Project of agricultural popularization seeks to increase food security, especially in the areas receiving technical assistance, through increasing productivity of traditional agricultural systems (p 101).

The Fouta Djallon integrated regional development programme groups together twelve pilot projects, of which five are already in operation and five others require funding.

Other projects (1991-1993) include:

- Agriculture, forestry, fisheries and livestock breeding (84 projects)
- Mines and geology (15 projects)
- Environment (4 projects)
- Energy (18 projects)
- Drinking water (12 projects)
- Urban development (15 projects)
- Transport (44 projects)
- Postal service and telecommunications (24 projects)
- Health and social affairs (33 projects)
- Education and scientific research (32 projects) (pp 99-109)

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

General objectives:

- Achieve food security and self-sufficiency without degrading the environment
- Formulate a policy for soil improvement and conservation
- Ensure rational management of existing forest resources in the short-, medium- and long-term
- Conserve the quantity and improve the quality of water resources through judicious protection, sustainable utilization and distribution, and by developing and protecting river basins
- Ensure sustainable energy self-sufficiency by promoting and making use of new and renewable sources of energy and by constructing hydro-electric dams
- Develop Guinea's industrial capacity
- Revive closed mining sites
- Prevent and eliminate desertification and drought by helping populations living in high risk zones to satisfy their food, housing and fuel needs
- Implement environmental education and training programmes to raise public and decision-makers' awareness
- Encourage and promote the participation of local organizations in actions of environmental protection and rational management of available resources
- Strengthen legislation and institutions (pp 74-75)

5 . FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

By the end of 1987, Guinea's external debt stood at US\$1,478.4 million, and debt service was estimated at US\$174 million or 26.6% of export receipts.

In April 1989, a meeting was held in Paris to consider Guinea's request to alleviate the debt service. The request was granted through debt re-scheduling in conformity with the terms contained in the approved minutes of the meeting (p 114).

Financial resources are required to attain the following goals:

- food security and self-sufficiency;
- energy security;
- sustainability of economic growth and employment;
- improvement of the quality of life both in rural and urban areas.

The international community should help Guinea achieve financial stability by providing financial and technical aid (p 70).

The first Consultative Group meeting for Guinea, held in March 1987 in Paris, enabled the mobilization of US\$1.3 billion including:

- donations amounting to 32.8% of the total;
- concessionary credits to support the balance of payments and public investment programmes;
- concessionary loans representing about a third of the total;
- funds from France's Caisse Centrale de Coopération Economique (pp 112-114).

Funding requirements for the 1991-1993 Public Investment Programme (pp 99-109):

SECTOR	NUMBER OF PROJECTS	COST OF PROJECTS (millions)	EXTERNAL FUNDING REQUIREMENTS (% of total cost)
Primary sector (agriculture, fisheries, forestry, livestock)	84	GFr. 234,383 (US\$ 321)	90
Mining	15	GFr. 29,593 (US\$ 40.5)	98.6
Environmental Action Plan	4	GFr. 3,713.1 (US\$ 5)	93.3
Energy	18	GFr. 60,066.1 (US\$ 82)	90
Water	12	GFr. 68,042.4 (US\$ 93)	96.3
Urban development	15	GFr. 85,895.8 (US\$ 117.7)	72
Transport and public works	44	GFr. 186,043.1 (US\$ 254.8)	83.5
Postal service and telecommunications	24	GFr. 288,613.1 (US\$ 395.4)	79.2
Health and Social Affairs	33	GFr. 54,268.9 (US\$ 74.3)	90.5
Education and scientific research	32	GFr. 69,319.3 (US\$ 95)	45

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

Construction of small hydro-electric power stations is envisaged (p 106).

7. INTERNATIONAL COOPERATION

Since 1986, the international community has supported the implementation of sensitization measures and structural adjustment programmes, in the form of:

- aid to the balance of payments (Saudi Arabia, USA);
- a stand-by loan from the IMF and a structural adjustment loan from the World Bank;
- a loan to bolster the currency (France) and provide food aid (France, USA, Italy and Japan);
- the funding of the three-year programme of public investment (1987-1989) launched by the government during the Consultative Group meeting in Paris, and the sectoral meeting that followed in Conakry.

In October 1991, a round table was held between the Guinean Government and donors for the development of the agricultural sector (p 96).

In 1987, following the appeal for international aid made by the Government, 72 National NGOs and 15 foreign NGOs were operational, either with their own capital or with resources given by bilateral or multilateral donors, following their specific objectives or zones of intervention (p 111).

8. EXPECTATIONS FROM UNCED

The Conference should lead to a general project of socio-economic renewal on both a national and global level.

It should generate a new awareness and new habits, satisfying the essential needs of human beings in a sustainable manner, without distinction of race, sex or religion. It therefore is necessary to redefine an economic policy which transcends the limited notion of monetary value and ensures harmony between the traditional economy and the environment.

The new economy should be characterized by the development of energy-saving products, the implementation of environmentally sound technologies and the expansion of the services sector.

Since a rich minority hold the future of humanity in their hands, they hold the key to ensuring that the Conference results in the redefinition of a new world partnership, in which developing countries can share equally with them the responsibilities and the benefits of safeguarding our common future.

It is only at the price of this new partnership that humanity will be able to attain the objective of sustainable development (pp 114-115).

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JORDAN

Full Title: National Report
Date of Report: 1991
Version: Final
Original Language: Arabic
Other Language(s): English
Total Pages: 60
National Contact Address: Ministry of Municipal, Rural Affairs and Environment

UNDP Contact Address: Resident Representative
 UNDP
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 Amman, Jordan
 Tel: (871-6) 661404 Fax: (871-6) 676582

1. DRAFTING PROCESS

National Committee: Editors & Authors:

The introduction is signed by the Minister of Municipal, Rural Affairs & Environment.

Other Ministries and Government Agencies:

No mention

NGOs, Grassroots Organizations and Public Involvement:

No mention

2. PROBLEM AREAS

Water:

- over-exploitation of wells has weakened reserves and has caused deterioration of water quality & salination (Zarqa basin & eastern region);
- waste water pollution has created health hazards and has affected the agricultural pattern;
- herbicides & pesticides have affected groundwater quality;
- shortage of water coupled with poor irrigation techniques;

Soil:

- severe erosion by wind and water arises from over-grazing, land mis-use and shrinking vegetational cover;
- degradation results from pesticides & herbicides and from salination;
- property ownership problems;
- movement of sand dunes and expansion of sandy lands;
- inappropriate agricultural practices lead to soil loss;

Air:

- industrial emissions from oil refineries, thermal power plants, factories and mines;

Agriculture:

- over-grazing and other incorrect practices lead to erosion & desertification;
- inefficient techniques of production (livestock breeding methods, early slaughtering);

Forests:

- fires, drought and illegal felling of trees;

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

The establishment of the following:

- the Department of the Environment within the Ministry of Municipal, Rural Affairs and the Environment;
- National Centre for Agricultural Research & Technology Transfer (Ministry of Agriculture);
- Environment Health Section (Ministry of Health);
- Insecticides Residues Laboratory (Ministry of Agriculture);
- Water Quality Laboratory (Ministry of Water & Irrigation);
- Water Research & Study Centre (University of Jordan);
- Environment Research Centre (Royal Scientific Society);
- grazing reserves;
- nature reserves;
- NGOs concerned with nature conservation & pollution control;

- waste disposal sites;
- signing of international treaties & conventions;
- writing of the National Environment Strategy (1991) and of the State of Environment Report (1989);

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

- eliminate incorrect agricultural practices (ploughing on slopes, grazing in highlands), by implementing laws;
- develop vegetation cover;
- join smaller plots to increase productivity;
- draw up legislation regulating use of insecticides;
- control sites of human settlements to safeguard agricultural lands;
- decrease water use by taxing consumption above a certain level;
- control depletion by defining quantities of safe yield of groundwater;
- decrease losses in irrigation by eliminating leakages;
- encourage recycling and use of old rainfall collection wells;
- improve waste management;
- develop water and air monitoring systems;
- control air pollution by setting limits on emissions from vehicles and factories;
- encourage use of wind and solar energy as alternatives to polluting energy sources
- expand national projects for afforestation;

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

Jordan has requested that the international community assist with development and environment projects. Specific mention is made of projects to study and develop water resources (p 59).

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

Jordan feels that "there should be preferential and non-commercial transfer of environmentally sound technologies to developing countries".

7. INTERNATIONAL COOPERATION

Jordan hopes to receive assistance from the international community in the following areas:

- financial assistance for projects to develop water resources
- training in industrial waste management & water control
- technology transfer in the areas of agricultural production, renewable energy resources and water pollution control
- strengthening environment/development institutions
- technical assistance in environmental projects
- debt rescheduling or cancellation

In addition it is hoped that countries will comply with international treaties and conventions, especially regarding shared water resources.

8. EXPECTATIONS FROM UNCED

- establishment of a special Green Fund to provide financial assistance to developing countries;
- debt cancellation or rescheduling, especially for developing countries with pressures on their natural resources;
- encourage developed countries to use their greater financial and technological capabilities to take the lead in eliminating damage to the environment and to assist developing countries;
- Jordan states that "environmental considerations should not be used as an excuse for interference in the internal affairs of the developing countries, nor should these be used to introduce any forms of conditionality in aid or development financing ...";
- greater role of UN specialised agencies;

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MALDIVES

Full Title: National Report: United Nations Conference on Environment and Development
Date of Report: 1991
Version: Final
Original Language: English
Other Language(s): -
Total Pages: 38 plus 4 annexes
National Contact Address: Ministry of Planning and Environment
 Male, Republic of Maldives

UNDP Contact Address: UNDP Resident Representative
 P.O. Box 2058
 Male, Republic of Maldives
 Tel: (960) 32 45 01
 Fax: (960) 32 45 04

1. DRAFTING PROCESS

National Committee: Editors & Authors:

The report was produced by the Environment Section of the Ministry of Planning and Environment.

Other Ministries and Government Agencies:

The report was first approved by the National Commission for the Protection of the Environment (NCPE) which is empowered under Maldivian Law in all matters relating to the environment. The Commission is chaired by the Minister of Planning and Environment and contains representatives from the following bodies:

- Ministry of Planning and Environment
- Ministry of Education
- Ministry of Defence and National Security
- Ministry of Trade and Industries
- Ministry of Fisheries and Agriculture
- Ministry of Atoll Administration
- Ministry of Public Works and Labour
- Ministry of Tourism
- Ministry of Home Affairs and Sports
- Ministry of Transport and Shipping
- Department of Meteorology
- Office of Physical Planning and Design
- Maldives Airport Authority
- Television Maldives
- Voice of Maldives
- Male Central Hospital
- Male Municipality

NGOs, Grassroots Organizations and Public Involvement:

The draft report was produced with technical assistance from an international consultant. Copies of the draft report were distributed to NGOs for comments which were considered by the NCPE prior to finalization of the report.

The report was subsequently approved by the Ministry of Planning and Environment for submission to the Preparatory Committee of UNCED.

Financial assistance was provided by UNDP.

2. PROBLEM AREAS

The following urgent problems were identified by the 1989 national workshop on environment and development:

Terrestrial/human environmental problems:

- Freshwater management
- Migration to Male
- Population growth
- Solid waste disposal
- Contamination of groundwater by sewage
- Shortage of fuelwood supplies and deforestation

Marine environmental problems:

- Coral mining
- Contamination of coastal water by sewage
- Sea-level rise
- Solid waste disposal
- Dredging

Constraints to sustainable development (pages 26-28)

In-country constraints:

- Narrow existing resource base of the country and limited opportunities for its expansion;
- Small land area dispersed over considerable oceanic distances leading to problems of communication and to financial logistic difficulties in the provision of services such as health and education;
- Rapid depletion of freshwater reserves caused by aggregation of people into more "economic" units as in the case of Male, where compaction of the road surface by vehicles prevents rain from permeating and recharging the aquifer;
- Shortage of trained manpower at all levels and lack of high level education and training opportunities within the country, resulting in dependence upon aid for provision of such services;

- Absence of a comprehensive in-country data base leads to inadequate decision making;
- Lack of national inventories of fresh water resources hampers development of appropriate national policies;
- Impact of coral mining as a source of construction materials;
- Over-exploitation of fuelwood supplies and dependence on external energy sources.

Externally generated constraints to sustainable development:

- International organizations and aid agencies fail to recognize the unique constraints to development provided by small land areas dispersed over enormous maritime distances, combined with the unique and fragile nature of atoll environments;
- Many of the solutions to development problems advocated by international experts involve high technology and high energy consumption, reflecting the conditions and experience of large states rather than the needs and capabilities of small states;
- The adoption of unsustainable modes of development is enhanced by the sectoral approach of donor and assistance agencies to environmental and other development problems;
- A lack of financial resources and appropriate advice has resulted in the adoption of unsound waste disposal practices for both solid and effluent wastes, which in turn results in pollution problems in both terrestrial and marine environments.

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

A national workshop on environmental management and planning in the Maldives was organized and held in late 1989. This workshop developed a National Environmental Action Plan and Work Programme which contains the overall environmental strategy of the government (p 30).

Government support to institution building in the environmental sector has concentrated on training and the expansion of the environment section of the Ministry of Planning and Environment, and has included the recent establishment of an Environment Research Unit with responsibility in the fields of environmental monitoring and assessment (p 33).

To date, few activities have been initiated in the environment sector due to absence of indigenous expertise and a limited number of trained and skilled personnel in all fields associated with development. The following activities, however, have been undertaken:

- Assessment by experts of the scale of some environmental problems, such as waste disposal in Male;
- High priority given to environmental education and awareness, through regular radio and television programmes as well as printed material. Much of this work is carried out by environmental NGOs;
- Research work in coral reef biology and monitoring;

- Since 1987, the Republic of Maldives has been part of the Tropical Ocean and Global Atmosphere (TOGA) programme of WMO and tide gauges have been established in Gan (February 1987), Male (August 1989) and Hanimaadhoo (July 1991);
- An aquifer recharge project has been carried out in Male with the assistance of the Danish Government;
- Due to the extensive damage caused by high waves in April 1987 and in view of the predicted sea level rise and its impact on low lying coastal areas, an extensive Male South break water project was carried out with assistance from the Government of Japan (pp 34-35).

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

Certain ameliorative actions to be taken immediately have been recommended to address the marine and terrestrial/human environmental problems mentioned above. To help in the process, a public awareness campaign is to be mounted immediately, to inform the public of the fragility of the aquifer system and the need for appropriate actions at an individual, household and community level.

Individual and community actions to be undertaken for immediate implementation to conserve fresh water in Male include:

- directing all rainfall from roofs, not being directly utilized, into the aquifer;
- designating certain roads as pedestrian-only areas, and to reduce compaction, heavy vehicles are to be restricted to certain routes;
- developing methods to ensure that standing water is directed to aquifer recharge;
- investigating the possibility of supplying piped water to the reclaimed area of Male.

Recognizing that there are no immediate actions which can be undertaken to improve the problems of migration to Male and population growth, an environmentally sound national population management policy will be developed.

Actions to be undertaken immediately to address marine environmental problems:

- discouraging the use of coral and coral aggregates for building purposes;
- adopting a policy of waiving duty on imported aggregate for construction to mitigate environmental stress on marine resources;
- encouraging the government to set an example in this regard by not using coral in the construction of public buildings;
- taking immediate steps to ensure the continued survival of threatened marine species.

Problems of climate change and sea level rise in the Maldives need to be addressed through a combination of international and national actions. National actions which can be taken are:

- initiating programmes to measure the relative changes in sea level rise in the Maldives;
- identifying and implementing appropriate mitigation measures for anticipated potential climatic and sea level impacts;
- considering the consequences of global climatic change in the process;
- actively participating in the relevant global programmes concerned with addressing this issue.

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

The Male South break water project (1,160 meters) cost more than US\$14 million and assistance was received from the Government of Japan (see 3. Past and Present Capacity Building Initiatives).

Substantial financial investments in capital and human resources are required if environmentally sound and sustainable development is to be assured in the Maldives. Regrettably such resources are unavailable in-country at the present time and extensive financial and expert assistance will be required of the international donor community over the next two decades (p 33).

Activities of the National Environment Action Plan will be financed by the government, and by international agencies such as the UN agencies, the Commonwealth Secretariat and other international organizations, as well as through bilateral agreements with donor states (p 48, Annex I).

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

Fisheries:

The tuna fishery is based on trolling and pole and line fishing from mechanized dhonis, thus producing a "dolphin friendly" product (p 15).

7. INTERNATIONAL COOPERATION

- Active participation in a number of relevant programmes and activities of the UN and its specialized agencies, including WMO, FAO and ICO;
- Maldives government representatives continue to actively participate in the environmentally related regional activities of bodies such as UNEP, ESCAP and WMO (IPCC) (p 31);
- Given the concern of the country with the potential impacts of climatic change and sea level rise, the Republic of Maldives will continue to press for the adoption of a Global Convention for protection of the atmosphere and limitation of greenhouse gas emissions;
- The Republic of Maldives will continue to press for recognition by developed countries of their liabilities and responsibilities towards countries such as the Maldives which have contributed little to global problems, but which are likely to be among the first and perhaps the most significantly affected by changing climate and rising sea level;
- Given the unique problems of environment and development in small archipelagic states, it is vital that international and multi-national corporations, bilateral donors and international financial agencies such as the World Bank adopt approaches and policies which recognize the need for specialized technological solutions to these unique developmental problems and assist small island governments in identifying and adopting appropriate technological innovations;
- The Ministerial level "Small States Conference on Sea Level Rise" held in Male in November 1989 resulted in the Male Declaration which calls on the United Nations system to assist the small states in implementing the terms of the declaration. Subsequent to this conference, a meeting of the Male Declaration Action Group was held in

January 1991, which produced a recommended programme of action for small states. To be effective in implementing these recommendations and the Declaration itself, technical and financial assistance are needed from the UN system to support the work of the Task Force, possibly through the formation of a permanent office and Secretariat.

8. EXPECTATIONS FROM UNCED

The Republic of the Maldives hopes that an immediate result of the conference will be the signing of Conventions on Biodiversity and on the Protection of the Atmosphere (Global Framework Convention on Climate Change).

Enhanced international awareness is required of the unique problems of development in small archipelagic states, as are appropriate adjustments to the United Nations system to facilitate the identification and implementation of mechanisms for achieving sustainable development in such countries.

The Maldives expects a direct and prompt response from the United Nations system to the call for assistance made in the Male Declaration, and in particular that appropriate support will be provided for the initiatives developed collectively by the Small States following that Declaration.

UNCED should help ensure that developing countries are not only placed in a better position to develop their own technologies, but also that they have access to environmentally sound technology. Greater emphasis should be placed on investigating real possibilities for transferring technology to developing countries.

The Maldives hopes that UNCED will be able to get a commitment from the developed world for making available new and additional funds to the developing countries so that they can tackle more effectively their environmental problems (p 38).

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MALI

<i>Full Title:</i>	Rapport National du Mali
<i>Date of Report:</i>	August 1991
<i>Version:</i>	Final
<i>Original Language:</i>	French
<i>Other Language(s):</i>	-
<i>Total Pages:</i>	218
<i>National Contact Address:</i>	Ministère du Développement Rural et de l'Environnement
<i>UNDP Contact Address:</i>	UNDP Resident Representative B.P. 120, Bamako, Mali Tel: (223) 224380 Fax: (223) 226298

1. DRAFTING PROCESS

National Committee: Editors & Authors:

A National Preparatory Committee was set up. The Preface is signed by the Prime Minister, Mr. Soumana Sacko. The Foreword is signed by the Minister of Agriculture, Livestock and the Environment, Mrs. SY Maïmouna.

Other Ministries and Government Agencies:

Ministry of Rural Development and Environment

NGOs, Grassroots Organizations and Public Involvement:

Several national bodies and NGOs were consulted, although specific details were not given.

2. PROBLEM AREAS

- Desertification of more than 58% of Mali's surface area while 30% is being threatened both by desertification and drought;
- Destruction of habitats and changing climate;
- Diminishing water resources and rainfall;
- Loss of forests owing to overgrazing, forest fires and climate changes;
- Deteriorating soil fertility owing to salination, water and wind erosion, compounded by the soil loss at an annual average rate of 6.5 tonnes/hectare;
- Air and water pollution especially in Bamako;

- Demographic explosion, poverty and livestock pressures exacerbate the effects of drought;
- Diminishing arable lands;
- Bad cultural practices like eliminating trees without finding alternatives to preserve water content in soils;
- Inadequate waste disposal systems;
- Introduction of new systems of production, which are unsuitable to the local environment;
- Deteriorating urban environment owing to increasing quantities of solid and liquid waste and the lack of infrastructure for their disposal;
- Depletion of the ozone layer;
- Deteriorating biological diversity caused by mismanagement of natural resources;
- Difficulties in implementing plans and projects;
- Insufficient statistical data on the participation of different segments of the population and institutions;
- Diminishing fauna - Mali has already lost between 15 to 20 % of its potential;
- Current technology transfer is yielding unsatisfactory results due to difficulties in adapting to local systems of production.

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

- Law no. 86-9/ AN- RM of 1986 set up a commission to check that industrial units treat as well as recycle waste waters besides purifying the air;
- Law no. 89/6/AN-RM prohibiting the import as well as the transit of toxic wastes;
- (Annex II contains a full list of laws in force on the environment);
- A Veterinary Central Laboratory has been set up to analyze toxic products;
- A Sanitary Development Project has been launched to provide drinking water to Kita and Bafoulabé, in addition to several other programmes set up for the same purpose;
- A Code on Forests is in operation; the purpose of which is to control the use of forests since the latter cover 95 % of the land;
- A Code on Water is also in operation, the aim of which is to regulate the use of water;
- A food strategy has been formulated to attain self-sufficiency and improve nutrition standards;

- A national programme to combat desertification is being implemented including eight sub-programmes covering, amongst others, research, training and green areas;
- A few plans have already been formulated on the upgrading of water resources, on necessary changes in the agricultural sector, on rural development and on agronomic research;
- More legislation needs to be formulated so as to define management concepts and those of pollution control and prevention (p 107).

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

- Implement a structural reform of the international economy to alleviate the debt burden of developing countries and improve the terms of trade, thus ensuring the rational use of natural resources;
- Strengthen international cooperation in the field of development as well as in research;
- Promote regional production, focusing on regional investment in heavy industry and infrastructure;
- Adopt an integrated approach to the transfer of technology through appropriate intersectoral and interindustrial links;
- Deploy more efforts on afforestation, agroforestry and dune stabilization;
- Provide more international assistance in the management of local wastes;
- Priority is set upon a development model that does not only concern itself with economic growth but with raising the standard of living and resolving the numerous factors that lead to environmental degradation like poverty, poor infrastructure and the lack of hygiene;
- Increase productivity and diversify production in the primary sector;
- Work towards a better management of natural resources through the establishment of local collective groups and producers accountable for any violations of environmental laws;
- Develop human resources through a specific policy on population which will take into account the migration dimension;
- Improve the status of women especially in the informal sector, in particular through an improved credit system;
- Combatting desertification, which is also a priority of the five year plan (p 114).

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

No specific mention

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

- Solar energy, wind energy and biogas potential are not being fully exploited

7. INTERNATIONAL COOPERATION

- There is a need to strengthen regional cooperation in the management of water resources especially the Niger and Senegal rivers between Niger, Senegal, Mauritania and Guinea. Thus, work done by the Administration for the Niger Basin can be reinforced;
- UNDP is financing five projects on ground water in Mali;
- A Regional Centre on Solar Energy has been set up with the collaboration of French, German and US firms;
- A National Programme on the management of natural resources has been initiated with the collaboration of both FAO and the World Bank.

8. EXPECTATIONS FROM UNCED

Measures should be taken to include natural resources in any socio-economic evaluation as well as at the level of national and sectoral decision-making.

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MAURITANIA

Full Title: Environnement et Développement en Mauritanie:
 Rapport de Synthèse
Date of Report: July 1991
Version: Final
Original Language: French
Other Language(s): -
Total Pages: 54
National Contact Address: Ministère du Développement Rural,
 Nouakchott, Mauritania

UNDP Contact Address: UNDP Resident Representative
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1. DRAFTING PROCESS

National Committee: Editors & Authors:

The synthesis report was prepared by three members of the Coordination Bureau of the National UNCED Preparatory Commission. It was published by the National Committee on combatting Desertification, Ministry of Rural Development.

Other Ministries and Government Agencies:

Six persons from government departments and academic institutions participated in the preparation of the four thematic reports.

NGOs, Grassroots Organizations and Public Involvement:

No mention

2. PROBLEM AREAS

- Pressures from high rate of population growth;
- Unfavourable climatic conditions, in the form of droughts, lead to:
 - rural poverty;
 - migration to urban centres, exacerbating problems of shortage of food and water as well poor sanitation;
 - sedentarization of nomads;
 - disappearance of fauna and flora reserves;
 - reduction of pastoral and forest resources (e.g. Arabic gum exports fell from 5,700 tonnes per year in 1972 to 150 tonnes per year between 1980 and 1987).

- Desertification caused by low rainfall, over-exploitation of arable land, gathering of fuelwood and overgrazing;
- Sand movements and dunes generate deposits which are a threat to oases, farms, water spots, infrastructure and communication networks. Sand movements also cause erosion which leaves gullies;
- Soil degradation resulting in loss of farmland which in turn results in a reduction in cereal production (existing production does not even cover 1/3 of national needs);
- Importation of energy drains foreign currency;
- Pollution caused by spills of hydrocarbons in ports, dumping of industrial and oil refinery wastes and waste water into river Senegal (source of freshwater). Chemical fertilizers are also a source of pollution;
- Salinity problems in river Senegal;
- Illiteracy;
- Inadequacy of research facilities.

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

A number of bodies have been established to cater for the requirements of the environment/development strategy:

- Institutions (Office of Nature Protection, Environment Service, Research Institute);
- The Plan Multisectoriel de Lutte contre la Désertification (PMLCD) is a master plan aimed at combatting desertification (see 5. Financial Arrangements and Funding Requirements).

With a view to combat drought and desertification (see table), through the Directorate of Nature Protection, Ministry of Rural Development, the Government took action to protect socio-economic infrastructures against sand deposits, to enhance forestry production and to improve conservation and development of natural resources.

Between 1986 and 1990 afforestation of nearly 11,000 hectares of land was achieved with the planting of 6.6 million trees.

NGOs have helped through the promotion of public awareness in environmental preservation and the fostering of local projects on afforestation, improved stoves, etc.

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

- Integration of sectoral actions and projects into a socio-economic framework using a structured planning approach supported by a coherent policy of national development;
- Strengthening of the means to fight environmental degradation;
- Creation and strengthening of the national, departmental and local structures responsible for soil management;

- Establishment of legislation on the environment;
- Strengthening of regional and sub-regional integration structures such as the Union du Maghreb Arabe (UMA), the Comité Interétat de Lutte contre la Sécheresse au Sahel (CILSS) and the Organisation pour la mise en valeur du Fleuve Sénégal (OMVS);
- Extension of the scope of international cooperation while developing internal funding sources;
- Establishment of a system to protect fishery resources: efficient monitoring system, forecasting of marine pollution;
- Choice of simple inexpensive technologies which are easily understood by the people and do not damage the fragile local ecosystems;
- Definition of a clear policy in matters of human resources compatible with the natural resource base (p 52).

Mauritania also supports the recommendations formulated at the regional and sub-regional levels, especially during the Bamako January 1991 Conference, the April 1991 Tunis meeting of Ministers from French-speaking countries, and the Concert Meeting of the 22 CILSS and IGADD (Intergovernmental Authority on Drought and Development) countries. Among these recommendations, the following are especially noteworthy:

- Improving food security;
- Improving energy security;
- Attaining sustainable economic growth and employment;
- Attaining stability of financial resources;
- Improving the quality of life and the habitat;
- Ensuring transfer of technology.

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

Combat against desertification: funding needs in millions (PMLCD)

(US\$1 = UM 86.64, July 1991)

Source of UM figures: PMLCD synthesis draft document, 1991 (FAO)

Total	National	External	Acquired (external)	Sought (external)
UM 14,975 (US\$ 172.8)	UM 1,600 (US\$ 18.5)	UM 13,375 (US\$ 154.4)	UM 4,051 (US\$ 46.8)	UM 9,324 (US\$ 107.6)

The whole programme (development, afforestation) covers about 400,000 hectares (p 35).

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

Solar and wind energy should be harnessed:

- to bring a stop to the drain of funds associated with the increasing importation of energy;
- to alleviate the pressure on ligneous resources (p 24).

7. INTERNATIONAL COOPERATION

- Strengthening of international cooperation is necessary to achieve a sound environment and sustainable development (p 45);
- The deficiencies of multilateral and regional cooperation have given rise to the proliferation of sub-regional organizations, which are more flexible and more adapted to specific problems (p 46).

At the sub-regional level, Mauritania is a member of:

- CEDEAO (Communauté économique des Etats de l'Afrique de l'Ouest);
- CILSS (Comité Interétat de Lutte contre la Sécheresse au Sahel);
- OMVS (Organisation pour la mise en Valeur du Fleuve Sénégal);
- UMA (Union du Maghreb Arabe).

In spite of inadequate legislation, a number of international NGOs are already active in the environmental and development fields, while local NGOs are not very operative (p 48).

8. EXPECTATIONS FROM UNCED

The following issues should be discussed at the conference:

- Protection of the atmosphere by fighting climate change, depletion of the ozone layer and transboundary air pollution;
- Protection of fresh water resources and control of their quality;
- Protection of oceans, including landlocked and semi-landlocked seas;
- Protection and management of soils, especially by combatting deforestation, desertification and drought;
- Conservation of biological diversity;
- Utilization of ecologically rational biotechniques;
- Ecological management of wastes and prevention of illegal international trafficking of dangerous and toxic products and wastes;
- Improvement of living and working conditions of the poor;
- Improvement of the quality of life and of human health (Introduction, pp. vii-viii).

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MOZAMBIQUE

Full Title: Country Report for UNCED '92
Date of Report: October 1991
Version: Final
Original Language: English
Other Language(s): -
Total Pages: 178
National Contact Address: Provisional Secretariat, Environment Division
 National Planning Commission

UNDP Contact Address: UNDP Resident Representative
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1. DRAFTING PROCESS

National Committee: Editors & Authors:

A Provisional Secretariat in the Environment Division of the National Planning Commission was established in 1990 with the support of UNEP and UNDP. The Prime Minister is also Planning Minister and heads the Commission. The Minister of National Resources is responsible for the environment. The institutional arrangements are still provisional. The Secretariat is temporarily housed in the Ministry of Agriculture. The report states that plans are under way to form a National Environment Council.

Other Ministries and Government Agencies:

See para. above

NGOs, Grassroots Organizations and Public Involvement:

An NGO, the Environmental Working Group (GTA) was set up in 1986 with support from Norway (NORAD). It produced a report entitled "The Present Environment Situation". The GTA comprises officials from the present Provisional Secretariat and also lecturers and students. Other environmental groups are springing up in the provinces of Cabo Delgado, Sofala, Manica and Nampula. The report is not specific about the NGO role in the preparatory process.

2. PROBLEM AREAS

- Poverty is endemic affecting more than 60% of the population. The species most at risk in Mozambique today is the human species (p 9, Executive Summary)
- People in poverty can only consider survival not environmental maintenance (p 62)
- About 40% of the population is affected by the war

Coastal degradation:

- Diminishing of the mangrove forest (nursery for shellfish) owing to the growing population pressure on the coast

- Shifting cultivation is a cause of coastal erosion
- Sedimentation caused by marine or coastal agents, such as currents, high tides, wave action and wind
- Growing population on the islands caused by the war-led influx of people from mainland Mozambique

Wildlife:

- Conservation areas are unmanned and, therefore, have no law enforcement capability
- Institutional and operational deficiencies
- Human settlements inside parks and reserves
- Poaching mostly done by military or paramilitary forces
- Problem of endangered species

Water resources:

- Provision of clean water to the population
- Inadequate systems of hydrological control and monitoring
- Eutrophication conditions have developed downstream of most of the national rivers
- Alterations to natural water systems and protection and improved utilization of the extensive coastal wetlands

Forestry:

- Deforestation and slow pace of afforestation
- Insufficient research
- Lack of definition of the forest patrimony of the country
- Shifting cultivation in forests of high productive or ecological value
- Forest fires
- Institutional and functional insufficiencies

Other problems:

- Water pollution and soil contamination as a result of mining activities
- Insufficient infrastructure (housing, roads etc.) partly due to the war
- Education and health sectors suffer from cuts in government expenditure
- Hunger and malnutrition are widespread and 60% of the population who live in poverty can spend half of their income on food

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

Legislation:

There are more than 40 pieces of legislation relating to the control of use or preservation of the environment. These Acts may be divided into two categories: use-related and health-related legislation:

- The most significant "use" controlled legislative schemes are the Land Act (1979), the Water Act (1991), the Mining Act (1986) and the Forestry Act (1965). In addition to these general Acts of control, there are examples of specific regulation of aspects of the environment such as the Farming and Hunting of Wildlife (1970) and the Regulation of Foreign Fishing Boats (1978);

- The most significant of the health related Acts deal with the control, handling and processing of food, pesticides use and workers safety.

Recently legislation was passed to protect cultural property and national heritage sites (p 121).

Programmes and projects:

- With the help of UNEP and UNDP, a Provisional Secretariat in the Environment Division was set up to coordinate environmental activities in the country. It has taken the lead in developing an environment legislative base, developing a national strategy and raising environmental awareness through the media and the educational sector. (see section 1 of this summary)

Public awareness:

- A number of seminars to raise awareness of environmental issues has been organized. A project proposal is currently being formulated to enable institutional decentralization to the provinces, based on three regional centres in the north, centre and south of the country. (pp 135-136)

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

Global:

- Change the disparities in the global economic system (declining terms of trade for the countries of the South);
- Debt reduction to alleviate poverty, promote human resource development, institutional strengthening and environmental maintenance;
- Through international and regional initiatives peace should come back to the country so that farmers can return to their lands and resume living their lives without fear (pp 155 & 156);

National:

- The report suggests that a National Environment Council (NEC) could be formed. This would require regrouping various departments. The NEC could be convened by the Prime Minister;
- The natural resource users who take away from the environment must participate in the regeneration of the same by contributing funds to be managed at central and at local level;
- The fulfillment of Environmental Impact Assessment studies must be complied with in all sectors of activity;
- Conditions must be created for the inspection, monitoring and control of environmental degradation caused by current undertakings (enterprises); (p 11)
- Encouragement of displaced people to return to their original zones; (p 14)
- Promotion and implementation of programmes to improve environmental education and to protect the environment and natural resources; (pp 13-18)
- Better utilization of the land to increase productivity and reduce dependence on high cost foreign inputs;

- Improving food self-sufficiency;
- Better management of the relationship between soil, plants, trees, animals and water;
- Decentralization of decision-making and resource allocation;
- Strengthening legislation;
- Strengthening institutions; (pp 157 & 158)

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

- NORAD funded a coastal zone management project in the Northern province of Cabo Delgado;
- The Swedish International Development Agency, SIDA, Canadian CIDA, NORAD and UNDP have helped support the UNCED Mozambique report exercise;
- The Netherlands has been involved in drainage and sewage projects in major cities;
- Finland is involved in a major integrated development project in Nacala;
- Canada has given support to various small environment initiatives;
- The World Bank commissioned an environmental assessment of agricultural services rehabilitation and rural rehabilitation projects;
- FAO is supporting a project to help develop a policy framework for forests and wildlife;
- As regards protection for coral reefs, the Coastal Action Plan for Cabo Delgado, to be initiated shortly with IUCN sponsorship, should identify an area for intensive protection within its geographical limits;
- External resources are required to ease the debt burden, improve food security, health and educational facilities; (p 156)
- Funds needed, for manning of conservation areas and reconstructing basic infrastructures for Gorongosa National Park, amount to US\$900,000, 73 % of which is for essential housing for technical and ranger staff;
- US\$992,000 (average of US\$90,000 per province) are needed to strengthen the technical and operational capability of the provincial wildlife sector, mainly for transport equipment and reconstruction of outposts destroyed by the war;
- A specific environmental education sector must be created within the National Forest and Wildlife Service. Initial funding amounting to US\$50,000 is required to set up and put this sector in operation;
- US\$951,000 are required for completion-of detailed forest inventories;

- To counteract the problem of shifting cultivation, compensation will have to be paid to the farmers and inputs provided to facilitate their transition to sedentary farming. US\$633,000 are needed. The amount includes compensation for families and is intended to offset house rebuilding;
- Controlling bushfires will require workshops at central and district levels to clarify policies and procedures. Funds required amount to US\$314,000;
- Strengthening forest research will need US\$464,000 while strengthening institutions and operations of the Provincial Forest Service require US\$1.563 million. (pp 170-174)

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

Mozambique, like most Third World countries faces serious environmental problems. It has laid down a set of goals, basic principles for environmentally sound development, programmes and general recommendations. However, the report does not specifically mention any programmes or practices for environmentally sound technologies.

7. INTERNATIONAL COOPERATION

- The Nordic countries, in particular, have been taking the lead along with UNDP in helping support environmental initiatives; (See Financial Arrangements and Funding Requirements).
- Mozambique has concluded regional agreements with South Africa, Zimbabwe, Botswana and Swaziland for the rational use of international river basins. There is still need for a plan to harmonize these resources; (pp 46-48)
- With the view to improve the tourist industry (safaris), the World Tourist Organization is invited to assist this sector; (pp 113-115)
- Improvements in wildlife reserves and national parks require considerable investments and technical assistance for which there are already projects along those lines (See Financial Arrangements and Funding Requirements); (p 172)

8. EXPECTATIONS FROM UNCED

No mention

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NETHERLANDS

Full Title: Netherlands National Report to UNCED 1992
Date of Report: July 1991
Version: Final
Original Language: Dutch
Other Language(s): English
Total Pages: 91
National Contact Address: Ministry of Housing, Physical Planning
 and Environment (VROM)
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1. DRAFTING PROCESS

National Committee: Editors & Authors:

The report was written by an official committee composed of representatives of the government agencies listed below and was chaired by the representative of the Ministry of Housing, Physical Planning and the Environment.

Other Ministries and Government Agencies:

The Committee contained representatives from:

- the Ministry of Agriculture, Nature Management and Fisheries
- the Directorate-General for Development Cooperation
- the Ministry of Economic Affairs
- the Ministry of Foreign Affairs
- the Ministry of Transport, Public Works and Water Management
- the Ministry of VROM (Housing, Physical Planning and Environment)

NGOs, Grassroots Organizations and Public Involvement:

A "Brazil 1992 Platform" including representatives from the NGO community was consulted at the drafting and editorial stage. The members have not officially approved the report but some of their comments are found, in smaller print, in the report.

A list of the organizations represented in the Brazil 1992 Platform is given on page 91.

2. PROBLEM AREAS

The Netherlands is one of the most seriously polluted countries in the world. The following are just a few indicators:

- the quality of ground water providing two thirds of all drinking water supplies is threatened;
- polluting discharges interrupt the intake of surface water for drinking water production;
- one third of all trees are dying;
- some species of animals and plants are threatened with extinction;
- soil pollution has made it necessary in some cases to demolish houses recently constructed;
- environmental effects of the use of more motor vehicles (pollution, noise, energy consumption) become worse every year; (p 6)

The degradation of the environment in the Netherlands can be attributed to a number of factors:

- climate change (greenhouse effect and the depletion of the ozone layer);
- acidification;
- eutrophication - the disruption of ecological processes and cycles as a result of increasing amounts of nutrients in the environment;
- solid and liquid waste management;
- nuisance, including noise pollution, odour nuisance and threats to security;
- drying up, caused by a fall in the water table (p. 19);

The agricultural sector is intensively subsidized and relies heavily on the use of pesticides and manure. In addition, agricultural purchase of cash crop animal feed from developing countries causes unsustainable agricultural practices in these countries.

The dependence on other countries for raw material and income from exports means that the performance of the Dutch economy and the standard of living of the population are partly maintained by exploiting the "ecosystem" of other countries. This, in turn, causes unsustainable production of underpriced commodities and environmental degradation, particularly in the developing world.

The use of fossil fuels as source of energy causes pollution.

A large volume of construction waste is produced.

The EEC and its supranational powers may restrict the freedom of action of the Dutch government, particularly by restricting the use of economic instruments (p 74).

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

In May 1989, as a response to the Brundtland report and a national environmental survey, the government published a National Environmental Policy Plan (NEPP) for the period 1990-2010.

Intensive consultations are held with industry on the translation of the objectives contained in the NEPP into a practical environmental policy.

Measures to prevent environmental degradation are being laid down in voluntary agreements between the government and industry, partly within the framework of target group talks with industry, in which central government, trade associations and local authorities are closely involved.

Legal and economic instruments are used to deal with environmental issues (p 74).

The National Environmental Policy Plan for the Shipping Industry (MBS) was drawn up as a supplement to the NEPP. Its primary aim is to bring about a considerable reduction in oil discharges in the North Sea and in air pollution caused by shipping.

A research project was recently launched to establish the scale of the air pollution caused by shipping. The project will concentrate mainly on carbon dioxide, sulphur dioxide, CFCs and halogens.

Publicity campaigns are being expanded in an effort to increase public awareness in understanding the environmental problems, including that of climate change.

The Netherlands puts emphasis on the transfer of know-how in the areas of institution building, legislation, strategic planning, environmental impact assessment, environmental monitoring and information (p 58).

NGOs play a big role in dealing with environmental issues (p 70).

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

The Netherlands' sustainable development plan for the period 1990-2010, the National Environmental Policy Plan (NEPP), is based on six principles (p 53):

- The "stand still principle", which states that environmental quality must not deteriorate further;
- Prevention of pollution at the source;
- The Polluter Pays Principle;
- Use of the best practical means to prevent pollution;
- Waste must be disposed in a carefully controlled manner;
- Internalization: people must be motivated to act in an environmentally sound manner.

The NEPP sets out the most important targets:

- at the global level, the growth in the concentrations of substances which affect the environment must be brought to a halt by the year 2010 (the target date is 2000 in the case of ozone depleting substances);
- at the continental level, reductions of 80% to 90% in emissions of acidifying substances;
- at the fluvial level, measures must be taken to protect and restore safe drinking water supplies, bathing water, fish farming and freshwater and salt water ecosystems;
- at the regional level, far-reaching reductions (70-90% in emissions of acidifying and eutrophying substances before the year 2010);
- at the local level, reductions are needed in emissions of environmentally damaging substances and in noise and odour pollution.

In agriculture, the use of chemical pesticides must be cut by half, and ammonia emissions by 30% of the 1980 level by the year 2000.

In the energy sector, the target is to stabilize CO₂ emissions at the 1989/1990 level by 1995, and to have a 3-5% reduction by the year 2000. This entails, in particular, a sustained 2% annual growth in energy efficiency, increased R&D budgets and new taxes on energy.

The Nature Policy Plan, published in June 1990, is a comprehensive blueprint which outlines a number of recommendations for the preservation of natural resources (pp 44-45).

To foster the development of environmentally sound technologies, the policy document "Technology and Environment" (published in April 1991) recommends the following:

- support for research at universities and technological institutes
- improvement of the exchange of know-how between research centres and industry
- provision of adequate information
- provision of subsidies for the development of environmentally sound technologies
- granting of tax incentives for environment-linked investments
- inclusion of environmental subjects in school curricula (p 46).

Continued cooperation is necessary with NGOs in dealing with environmental education and raising of awareness.

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

The Research and Development budget for renewable energy sources has been raised from NLG 120 million to NLG 200 million a year (from US\$59 million to US\$99 million at the July 1991 exchange rate) (p 47).

The cost of implementing the NEPP will range from NLG 16 billion to NLG 57 billion (from US\$8 to US\$28 billion) annually by 2010 (p 56). These costs will increase dramatically if action is delayed (p 61).

At the global level, the Netherlands believes that the industrialized countries should be prepared to share in the costs of ecologically sustainable development of developing countries (p 79).

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

Subsidies will be increased or reintroduced to promote solar energy, wind-generated power, combined heat and power and other more efficient techniques, and to defray the costs of refitting insulation and more efficient heating systems in existing buildings. Related subsidy budgets have been raised from NLG 175 million to NLG 450 million (from US\$87 to US\$223 million) (p 47).

The technology transferred to developing countries must be environmentally sound, not just recent, or more efficient (p 83).

7. INTERNATIONAL COOPERATION

There is need for an integrated approach that can, in time, bring about sustainable development, both in the North and in the South.

The Netherlands already has some experience of debt-for-sustainable-development swaps, and wherever possible, it will make use of this instrument in the future. Lowering the debt burden at least has the effect of reducing the pressure to export (p 56).

The Netherlands will do what it can to steer the policies of UNCTAD, GATT and the World Bank towards sustainable development, and will encourage projects or trade arrangements that take sustainable development into account (p 56).

Within the context of bilateral development cooperation, the Netherlands will assist developing countries in promoting and achieving sustainable development, inter alia, through the full introduction and application of environmental impact analyses at project level and the conducting of environmental surveys and other measures aimed at strengthening their environmental institutional capacity (p 56).

The Netherlands will refuse to cooperate on projects that will adversely affect the rainforests and will support reforestation, land use planning efforts, and improved economic relations to ease the debt burden.

Support for family planning, the improvement of the situation of women, land reform programmes, "low external input agriculture" and local energy planning capacities will be channelled primarily through multilateral (UNFPA) and private organizations (p 58).

The Netherlands will help developing countries strengthen their institutions and NGOs. Priority will be given to technology transfer and increasing awareness. The policy is also geared to supporting projects and programmes that help implement international agreements.

The Netherlands will increase its contribution to the World Bank's and UNEP's efforts to improve on conventional GNP indicators of economic welfare, to take into account environmental phenomena.

As regards technology and technology transfer, the Netherlands' policy will be geared to preventing double standards; that is, when investing abroad, Dutch firms must in principle comply with the same environmental standards as they are obliged to observe in the Netherlands.

8. EXPECTATIONS FROM UNCED

Unless industrialized countries begin to be serious about their own policies, the developing countries will not be prepared to subscribe to international agreements on problems which they believe have their roots in the North. Additionally, the industrialized countries should be prepared to share in the costs to developing countries of ecologically sustainable economic development (p 79).

Although expectations from UNCED are not specifically mentioned in the report, a chapter entitled "Issues for the International Agenda", outlines some of the views that have been expressed by the Dutch government, particularly in the policy document "A World of Difference":

- strengthening of international institutions not only through the adoption of legislation, but also through the creation of effective instruments to ensure the implementation of agreed measures;
- improvement of the structure and effectiveness of scientific cooperation through new approaches such as the creation of a World Environmental Academy;
- strengthening of developing countries' institutions;
- supporting of developing countries' NGOs;

- provision of additional funds to developing countries to cover their contribution to solving the global environmental problems;
- development of new and innovative schemes to generate income, both nationally and internationally. An example is that of the Global Environmental Facility to which the Netherlands has agreed to contribute 4% of its funding.
- other funding mechanisms under review include:
 - levies on use of fossil fuels;
 - energy consumption quotas based on per capita standards;
 - economic instruments (user charges, pollution taxes, tradable emission rights etc);
 - the Polluter Pays Principle;
 - transfer of savings on defence spending to the protection of the environment. Following the burning of oil wells in the Middle East, the establishment of an "Environmental Security Council" should be considered seriously.
- consideration of environmental factors in the calculation of a country's GNP;
- launching of an international debate on how to obtain additional funds without increasing environmental degradation;
- need to develop environmentally sound technologies by industrialized countries to reduce global environmental problems and make these new technologies available to developing countries. Accordingly, developing countries should have access to information on technological innovation to identify the technologies that are most appropriate for their needs.

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NIGER

<i>Full Title:</i>	Rapport national
<i>Date of Report:</i>	October 1991
<i>Version:</i>	Final
<i>Original Language:</i>	French
<i>Other Language(s):</i>	None
<i>Total Pages:</i>	73 & Annexes
<i>National Contact Address:</i>	Comité National de Préparation de la CNUED Niamey, Niger
 <i>UNDP Contact Address:</i>	 UNDP Resident Representative B.P. 11207 Niamey, Niger Tel: (227) 73 47 00/73 22 75 Fax: (227) 72 36 30

1. DRAFTING PROCESS

National Committee: Editors & Authors:

The report was written by the National UNCED Preparatory Committee.

Other Ministries and Government Agencies:

The National Committee was composed of officials from all Ministerial Departments and Institutions concerned with environment and development:

- Ministry of Hydraulics and Environment
- The ad hoc committee in charge of up-dating the National Plan to combat desertification
- The Department in charge of the Integrated Natural Resources Management Programme
- The Ministry of Higher Education, Research, Technology and National Education

NGOs, Grassroots Organizations and Public Involvement:

One NGO is said to have participated in the process. A workshop had been arranged to facilitate approval of the report by all concerned parties. Unfortunately it did not take place as the time limit given to the national Committee had run out. Nevertheless, a copy of the first draft was given to each participant for comments. These comments were used to improve on the final version. The National Committee is said to have consulted "resource-persons" whenever it was necessary (p 73).

No mention is made of level at which the report was approved.

2. PROBLEM AREAS

- Adverse climatic conditions (drought, little rainfall) affect agriculture and agro-forestry. During the past 20 years, cereal production has grown by 1.6% and other vegetal food products by 0.6%. Yet, according to the World Bank, food production must grow by 4% to avoid famine. Gum production fell from 680 tonnes in 1976 to 28 tonnes in 1982;

- Population growth of 3.2% per year has caused doubling of cultivated land in 25 years, resulting in overgrazing, overexploitation of ligneous resources (deforestation), decrease or disappearance of fallow and soil degradation;
- Niger's already meager forest resources, are diminished by 70,000 to 80,000 hectares every year. Wood consumption grows by 4.2% per year;
- The declining water resource base is typified by:
 - drop in river water level;
 - partial drying up of Lake Chad;
 - reduced fish production;
- A crisis in public finance resulted in the State's reducing subsidies to certain sectors (agriculture, education, health). Stagnation of trade has led to a drop in income. Economic problems in neighbouring countries and development of agriculture in those countries have negatively affected demand in Niger's agricultural exports. The resulting rise in unemployment affects predominantly the rural population;
- Domestic and industrial wastes generated in urban areas are dumped into River Niger;
- Stagnant water contributes to a high incidence of Malaria and Onchocercosis;
- Drought gives rise to rural exodus, causing housing problems and hence slums;
- Sand deposits on agricultural land, infrastructure and houses are the most obvious manifestation of desertification;
- Soil erosion;
- Bush fires.

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

In order to rationalize management of natural resources, political, legislative and institutional structures have been set up:

- The Conseil National du Développement (CND), which is divided into sub-structures at provincial, cantonal and village levels, is responsible for development activities;
- The Sous-comité Développement Rural (SCDR) is responsible for the organization of the rural zones, participation at the grassroots level, food security and diversification of products among others;
- The Service National de Participation (SNP) is responsible for combatting desertification and natural disasters, preparing youth for active life, and training of people in civics;
- The Système d'Alerte Précoce (SAP) is responsible for forecasting, prevention of critical situations and alerting the authorities on socio-economic, health and food situations (pp 40-48).

In 1990, a national seminar on the emergence of NGOs in Niger was organized by the Ministry of Planning to look into the constraints related to their creation and to define a favourable judicial framework for the promotion of their actions (p 47);

More than six decrees or laws regulate pastoralism and rangelands (p 20);

A number of legal texts govern customary usage and its limits as well as the exploitation of forests (p 49);

A Rural Code is being drawn up (p 50);

There are four kinds of regulatory measures (relating to the sources, emissions, effects and a more efficient utilization of resources) to combat pollution (pp 51-53);

An ordinance was signed in 1989 prohibiting the importation, detention, storage, purchase or sale of industrial and toxic nuclear wastes. Culprits are to be sentenced to 10-30 years imprisonment and to a fine of CFAF 50-500 million (about US\$ 173 600 to 1.7 million) (p 52);

A number of projects/programmes have been implemented on environmental aspects of forestry:

- Collection and distribution of seeds co-run by the Institut National de Recherches Agronomiques du Niger (INRAN) and the Direction de l'Environnement (DE);
- 4.8 million plants were produced in 1985; more than 8 million plants were produced in 1989/90; 10 million plants are expected in 1991;
- Afforestation: plantations for fuelwood and commercial timber, parks and green spaces, protection (pp 58 & 59).

Mention is made of programmes to combat sand deposits on farms and infrastructure, soil erosion and bush fires (p 61);

Conservation programme: it is necessary to find alternative sources of energy to fuelwood (p. 62);

Nature conservation forms part of the curriculum in research institutes as well as in higher educational institutions (p 66);

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

- ensure food security;
- meet the energy requirements;
- strengthen the educational sector and improve the population's health situation;
- encourage people's participation in the development process;
- protect, restore and improve the environment.

through:

- the consolidation of the rural sector as the driving force of the economy and the rational exploitation of natural resources;
- the re-structuring of the role of the public sector in the economy;
- the development of human resources;
- decentralization of administration.

The report emphasizes that Niger endorsed the recommendations of the first consultative meeting of the 22 Sudano-Sahelian countries, held in Ouagadougou (Burkina Faso) in February 1991:

- improving food security;
- improving energy security;
- attaining sustainable economic growth and employment;
- attaining stability of financial resources;
- improving the quality of life and the environment.

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

Financial support is being sought from UNSO for the implementation of afforestation programmes (p 58).

A national seminar on fauna organized in March 1986 gave impetus to National Policy in this field. In 1987 the Government allocated F CFA 80 million (about US\$280,000 at the October 1991 exchange rate) for the development of the National Park (compared to the F CFA 3-4 million generally allocated or about US\$10,417 - 13,900).

The Baban Rafi Forest reserve project is being financed by DANIDA through UNDP/UNSO (p 25).

WWF, IUCN, DANIDA and Switzerland are financing the development project of the natural reserve of Aïr and Ténéré, while the Netherlands are financing the development of the Gadabéji reserve (p 63).

Four important projects in the fisheries sector have been set up between 1980 and 1990:

- Development of Aquaculture I, financed by the France's CCCE/FAC (1981-1986);
- Development of Fisheries II, financed by UNDP/FAO (1981-1986);
- Development of Aquaculture II, financed by the French CCCE/FAC (1986-1990);
- Development of Fisheries and Promotion of Fish Consumption, financed by UNICEF (1990-1993) (p 64).

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

Technology transfer should incorporate the principle of "Farmer First", and local technology should be encouraged (p 57).

7. INTERNATIONAL COOPERATION

- As regards sub-regional cooperation, Niger is a member of the Comité Interétat de Lutte contre la Sécheresse au Sahel (CILSS), the Autorité du Liptako Gourma (ALG), the Communauté Economique des Etats de l'Afrique de l'Ouest CEDEAO, the Authority of the River Niger Basin and the of Joint Niger-Nigerian Cooperation Commission.
- See also 5. Financial Arrangements and Funding Requirements.

8. EXPECTATIONS FROM UNCED

No specific mention is made, but Niger endorsed the proposals for UNCED's agenda made at the first consultative meeting of the 22 Sudano-Sahelian countries:

Agenda 21:

- programmes and projects for the sub-region must be set up and implemented in conformity with the priorities defined in the Bamako Declaration;

the Earth Charter:

- should take into account the link between poverty and protection of natural resources. It is necessary to develop arid and semi-arid zones and to fight soil degradation;

Conventions and agreements:

- should consider the issue of transfer of technology and substitutes to CFCs;
- a Food Charter should be elaborated and respected;

Transfer of Technology:

- appropriate technologies should be introduced that can be mastered by local populations and technology exchanges should be promoted between the countries on a sub-regional level;

Financial resources:

- unconditional funding should be provided, taking into account social benefits and improvements of the quality of life. A proposal should be made to set up a special fund, specifically aimed at the environment and sustainable development in the region;

Institutions:

- creation and strengthening of national structures and capacities; strengthening of regional cooperation; setting up of a flexible mechanism of coordination and cooperation between the continent's sub-regions; NGOs and the private sector should play a bigger role (p 71 & Annex 2).

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DOCUMENTATION

ANNEXES

NIGERIA

<i>Full Title:</i>	Achieving Sustainable Development in Nigeria. National Report for the United Nations Conference on Environment and Development.
<i>Date of Report:</i>	August 1991
<i>Version:</i>	Final
<i>Original Language:</i>	English
<i>Other Language(s):</i>	None
<i>Total Pages:</i>	60 plus overview
<i>National Contact Address:</i>	Federal Environmental Protection Agency (FEPA), Federal Secretariat, Phase 2, Ikoyi, Lagos Tel: (234-1) 680308, Fax: (234-1) 687600
<i>UNDP Contact Address:</i>	UNDP Resident Representative P.O. Box 2075, Lagos. Tel: (234-1) 603730 Fax: (234-1) 681213

1. DRAFTING PROCESS

National Committee: Editors & Authors:

Basic guidelines were formulated by the Nigerian UNCED Preparatory Committee. A focal point secretariat was set up. The Secretariat held discussions with over 160 experts from federal, state and government agencies.

Foreword is signed by Mamman T. Kontagora, Honourable Minister of Works and Housing with Responsibility for the Environment.

Additional assistance was provided by the UN Sudano-Sahelian Office, UNCED Secretariat and the Canadian International Development Agency (CIDA).

Other Ministries and Government Agencies:

Wide consultations (list of over 200 contributors pp 56-60)

NGOs, Grassroots Organizations and Public Involvement:

Wide consultations (see list of contributors pp 56-60)

2. PROBLEM AREAS

- Soil erosion is probably the most serious nationwide problem, (p 7); in some areas it has reached catastrophic proportions - including Anambra and Imo states - about 50 million people are affected.

- Desertification has reached catastrophic proportions in parts of Sokoto, Katsina, Kano and Borno states.
- Habitat loss: Sub-montane communities (including grassland and leguminous woodland) are being modified by overgrazing & burning.
- Biodiversity (flora): around 484 plant species are faced with extinction due to habitat destruction/deforestation;
- Biodiversity (fauna): Several species have disappeared including giraffes and black rhinos. About half of the 22-24 primate species are under threat (p 10).
- Wildlife Conservation Areas: Supervision and enforcement of policies is low.
- Population growth: projected growth rates are around 2.8-3 % per annum giving a 300 million population by the year 2022.
- Ground water management: problems include aquifer assessment, protection from over-exploitation, contamination, promoting complementary use of ground and surface water and institutionalising ground water resources into a general water resource framework.
- Inland water: pollution sources include sewage, industrial effluent, silting, pesticides and fertilizers;
- Coastal and Marine waters: pollution includes sewage, industrial effluent, domestic waste and hydrocarbons. The coast is especially vulnerable to frequent oil spills.
- Waste disposal: in many urban and rural areas waste disposal has been ineffective.
- Pollution: heavy metals, pesticides and herbicides (DDT, Dieldrin, Heptachlor & gramoxone) fertilisers, PCBs, phenols & petrochemicals are all released into the environment.
- Pesticides: misuse is rampant (p 12).
- Forest resources: once extensive forests are now greatly reduced - lack of funds have prevented many states from reaching plantation targets.
- Fish resources: The situation is one of over-fishing, with catches below national demand. "the trend is towards total collapse of marine resources" (p 8).

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

- More new parks and wildlife reserves have been established or planned.
- A National Policy on the Environment has been formulated.
- A National Conservation Education Strategy: drawn up in 1988, through collaboration of the Nigerian Conservation Foundation with the Ministry of Education. The Nigerian Educational Research and Development Council is looking to integrate Environmental Education into school curricular.

- The Federal Environmental Protection Agency (FEPA) was set up in 1988. FEPA consists of six departments: Environmental Conservation & Management, Environmental Quality, Finance & Administration Planning & Evaluation, Inspectorate & Enforcement Environmental Technology.
- Environmental Committees: At least a third of the states have established special environmental committees.
- The National Environmental Sanitation Programme encourages active involvement at community level.
- The National Resources Conservation Council (NRCC) was established in 1989. The NRCC serves a policy formulation and coordination role, including monitoring of conservation programmes, fiscal measures, designating and protecting habitats, making special awards and funding, controlling coastal zone development/erosion.
- The Ecological Fund: since 1981 the Federal Government has set aside 1% of the Federal Account for the amelioration of environmental problems. The National Committee on Environmental Problems (NCEP) helps advise on the utilisation of the fund.
- The National Commission for Women was established in 1989. "90% of food produced comes from the 'rural folks' and at least 40% of agricultural production activities, and 85% of agricultural produce processing and marketing are performed by women."
- Population: A national Policy on Population and Sustainable development exists (p 24).
- The most active NGO organisations are the Nigerian Conservation Foundation, the Nigerian Environmental Study & Action Team, Nigerian Environmental Watch and the Nigerian Environmental Society.

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

Key Priority areas listed (p 22) are:

- Alleviating poverty;
- Managing demographic change and population pressures including housing which represents an enormous and complex problem;
- Achieving food security;
- Preventing and reversing desertification;
- Securing adequate water supply and quality;
- Managing forest and wildlife resources;
- Ensuring efficient use of energy;
- Combating floods, inland and coastal erosion;
- Ensuring sustainable industrial production;
- Promoting trade and tourism;
- Adapting culture to technical change.

To accelerate Sustainable development Nigeria is committed to:

- Tackling the backlog of accumulated environmental degradation and pollution, including:
 - Extending environmental monitoring systems;
 - Conducting environmental surveys and setting new standards;

- Assessing & reporting on the state of the environment;
- Formulating environment management plans in all states;
- Preparation of a national bio-diversity strategy;
- Equipping FEPA: The agency urgently requires appropriate equipment and facilities;
- Expanding environmental management training.

- The integration of environment into the planning process:
 - Strengthening environmental information systems;
 - Assessing and avoiding significant adverse impacts on the environment;
 - Analyzing the impact of macro-economic policies on the environment;
 - Undertaking sustainable development audits;
 - Introducing resource accounting;
 - Making greater use of economic incentives and disincentives;
 - Preparation of a national sustainable development strategy.

- Harmonise institutional linkages to support the National Policy for the Environment:
 - Clarify Federal and state responsibilities;
 - Strengthen Federal State and Local Government partnerships;
 - Strengthen partnerships with industry;
 - Strengthen partnerships with NGO's;

- Clarify and strengthen legal, technical and financial capabilities:
 - Improve enforcement capability;
 - Prepare new environmental guidelines and laws;

- Financing the transition to sustainable development:
 - Increasing resources for environmental agencies;
 - Strengthening the Ecological Fund;
 - Increasing bilateral and multilateral assistance.

Fisheries: general assessment of marine fisheries required, monitoring of trawlers, review of marine fishery regulations.

Environmental information: measures to improve environmental reporting are given (p 19) including the training of environmental journalists, the establishment of environmental desks in all media organizations and the setting-up of a special documentation centre on the Nigerian Environment.

Prevention: move from a position of react-and-cure to one of anticipate-and-prevent.

In keeping with measures adopted by 22 Sudano-Sahelian countries in Bamako in 1991, Nigeria calls for the cancellation of the current public debt burden of all African countries.

Assume the debt owed by African Governments to leading development institutions and use repayments to fund environmental programmes (p 44).

Reschedule debt on a long term basis.

Improving international cooperation and laws.

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

Nigeria has declined from a middle income to low income country in less than a decade. GNP plummeted by 75% between 1982 to 1987. Debt service repayments are now more than a third of export earnings, over 10% of GDP. At around US\$32 billion, foreign debt approximately equals total GDP.

The Federal Government is spending \$300-500 million a year on environmental protection and resource management programmes, representing 1-1.5% of GDP. The World Bank estimates the annual cost of not taking additional environmental action exceeds \$5 billion, a sum far in excess of the additional funds necessary to finance the transition to sustainable development.

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

- There is an abundant supply of solar energy but as a power source it remains untapped. Wind power potential is limited by low wind speeds.
- Industrial waste management: the FEPA has produced guidelines but development of technical capacity, human resources and enforcement is required.

7. INTERNATIONAL COOPERATION

Nigeria places importance on improving international cooperation and laws. The following actions are of continuing priority:

- increase the effectiveness of the "Dump Watch" programme for tracking toxic waste;
- strengthen the Cairo programme (AMCEN), for ameliorating environmental degradation in Africa;
- support for regional programmes: food and energy security, sustainable economic growth, and employment, health and living conditions, and poverty eradication;
- support green belt establishment, particularly in semi-arid regions;

"The people of Nigeria remain concerned regarding ongoing global programmes and negotiations on climate change and bio-diversity" (pp 44 and 47).

8. EXPECTATIONS FROM UNCED

- I. Formulation of an Earth Charter stating basic principles and the shared rights and responsibilities of the states and peoples of the UN.
- II. Agenda 21 (p 48) which:
 - Sets priority goals and specific targets on critical environment and development issues: especially poverty and hunger;
 - establishes a timetable for meeting goals and targets;
 - launches new and extensive institution building and training programmes, especially in health, environmental protection, natural resource management and technology assessment;

- commits developed countries and international finance institutions to:
 - new measures for reducing high debt and debt service burdens and declining terms of trade;
 - providing new and additional resources to assist in implementing Agenda 21 and associated conventions;
- spells out new measures for securing affordable access by developing countries to appropriate and environmentally friendly technologies;
- strengthens existing international institutional arrangements and inter-agency cooperation in support of sustainable development;
- provides all countries with equal and binding arbitration and judicial processes for resolving environmental disputes, especially on shared water resources;
- puts in place an annual review and reporting process on progress made and needed in implementing Agenda 21 and the associated convention.

III. The signing of international conventions on climate and biological diversity.

Nigeria states that the success or failure of UNCED will depend on the extent to which these requirements are met (p 48).

9. TABLE OF CONTENTS FOR REPORT

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NIUE

<i>Full Title:</i>	Niue Country Report for the United Nations Conference on Environment and Development. (UNCED) Brazil 1-12 June 1992.
<i>Date of Report:</i>	30 July 1991
<i>Version:</i>	Final (but not printed)
<i>Original Language:</i>	English
<i>Other Language(s):</i>	-
<i>Total Pages:</i>	80
<i>National Contact Address:</i>	Office of the Secretary to the Government
<i>UNDP Contact Address:</i>	UNDP Resident Representative (UNDP office in Apia Samoa covers Niue) Private Mail Bag, Apia, Samoa Tel: (685) 23670-2 Fax: (685) 23555

1. DRAFTING PROCESS

National Committee: Editors & Authors:

A special Environmental Task Force (ETF) was set up - SPREP consultants assisted. The report was completed by several members of the ETF. Final approval was given by the Niue Ministers of the Cabinet, 30 July 1991.

Other Ministries and Government Agencies:

- Office of the Secretary to the Government;
- Office of Community Affairs;
- Health Department;
- Agriculture, Forestry, and Fisheries Department;
- Administration Department.

NGOs, Grassroots Organizations and Public Involvement:

"There was not enough time to hold meetings with the community and [task force] membership was confined to representatives of the departments which are involved with the environment." In future the force will include representatives from the wider community.

2. PROBLEM AREAS

Niue is the largest coral atoll in the world with a land area of 259 sq km and the highest point 69 metres above sea level. Population at its maximum in the 19th Century and again in the 1950s and '60s reached 5,000 - today the population totals some 2,000.

- Economic: "There is no realistic prospect of economic self-sufficiency for Niue". Niue has maintained a negative balance of trade since independence (p 36).

- Out migration: The high incidence of migration to New Zealand has resulted in a population decline and persistent shortages of skilled manpower (p 22).
- High transport costs make imports such as diesel expensive and inhibit exports and industrial initiatives. The import bill is described as "chronically heavy".
- Waste and Sewage disposal is regarded as inadequate; the effect of latrines on ground water poses real concern.
- The Freshwater Lens: Concern exists over the contamination of the lens, and the prohibitive cost of cleaning up already contaminated bore holes. The present good quality lens water is under potential contamination threat from coliform bacteria, herbicides such as paraquat (each household is estimated as using 5-10 litres per month) and high background radiation levels.
- Declining forest resource due to cyclone Ofa and logging but principle threat from agricultural clearance.
- The freshwater lens on which all water abstraction depends is not fully understood.
- Radiation levels: In several instances there has been an unusually high incidence of radioactivity of soil, water samples and crops, sources are natural. In addition there is concern about the possibility of uranium mining.
- Wildlife is plentiful but bird numbers are declining, causes may include pesticides and introduced species: pigs, cats and dogs
- Fish stocks are not fully understood and there is concern that some vessels are fishing illegally within Niue's waters, including use of drift nets (p 54).
- Reef damage: some damage results from siltation, and wharf construction.

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

- The Niue Concerted Action Plan (NCAP): overriding aims to maintain a living community and secure cultural survival, essentially through increased support for village life and rural development. The NCAP aims at establishing a positive and sustainable inflow/outflow migration balance.
- The 1989 Agricultural Census has proved a understanding of the importance of the major natural and resource issues.
- National Environmental Management Strategy (NEMS): It is anticipated that the task force will oversee the development of the NEMS and aid environmental Institutional building.
- A pension system was established in 1990.
- Disaster contingency plan and related committee.
- Land Titling Project: The long term benefit will involve the use of secured land as loan collateral.

- Forestry Project: Plans are being made to rehabilitate over-used areas through reforestation and plantation forestry using exotic hardwoods.
- Vanilla project: planting due to commence mid-1990.
- Tourism: Includes airport/runway upgrading, hotel construction, scenic site development.
- Community development: The repatriation scheme aims to encourage skilled Niueans to return. The housing project offers long term leases on crown land for those without land assess.

Niue has a variety of legislation relating to the Environment including:

- The Public Health Ordinance 1965: includes quarantine, infectious diseases, food mosquito control and water supply;
- The Fish Protection Ordinance 1965: prohibits fishing by the use of explosives, firearms or poison;
- The Village Council Ordinance 1967: empowers councils to declare "fonos" over seas and land for the protection of fish, shellfish, birds and coconuts;
- The Wildlife Ordinance: allows for the protection of an animal species by banning hunting during specified months.
- The Pesticide Bill 1991: at discussion stage during report formulation.
- The Conservation Bill 1991, at discussion stage during report formulation, the legislation is intended to invest a council with environmental responsibilities and enforcement powers, including administration of parks and reserves, forest & wildlife conservation, water management, conservation of soil resources, coastal zone protection, pollution control, assist in environmental training and research, and make recommendations to the Minister.

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

- The Niue Concerted Action Plan, section 20, entitled "Protection of the Natural Environment" outlines future directions:
 - (a) Raise awareness of the importance of environmental protection through schools and community education programmes;
 - (b) Undertake anti litter and clean up campaigns;
 - (c) Improve waste disposal legislation to deal with the rubbish and litter problem;
 - (d) Continue urban improvement of Alofi town;
 - (e) Provide legislative protection for living coral, prohibiting removal and export except under licence for coral jewellery.
 - (f) Establish a legislative base for a system of reserves, consistent with customary ownership, for the protection of landscape, fauna and flora.

- (g) Provide reserve status for forests, caves and important natural features, and make provision for monitoring and maintenance.
- (h) Cooperate with the South Pacific Commission in deriving information from the South Pacific Regional Environment Programme;
- (i) Livestock: Assess the environmental risks and benefits of keeping goats on Niue.
- (j) Oil spills: Required the use of a floating boom around the oil tanker and delivery hosesink during discharge.

In addition the report highlights the need for:

- Technical expertise to plan and implement the Environmental strategy, and expert legal advice on environmental legislation.
- Access to technical facilities necessary for monitoring.
- Improved monitoring of the freshwater lens both for contamination (biological/chemical /radioactivity/salinity) and the effects of abstraction.
- Improved water catchment so as to become less dependent on the freshwater lens.
- Restriction on the use of bulldozers and weedicides related to land clearance.
- Protection of sea caves to halt disfigurement.

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

External aid, of which around 90% is from New Zealand (1987-89), has made very significant contributions to government receipts, without which the balance of payments would have been "chronically and increasingly negative" (p 23). During the same period, however, total external aid in real terms fell by 41%, with the trend expected to continue.

The remaining 10% of total external aid is principally contributed, bilaterally, by Australia (The Australian International Development Assistance Bureau, currently provides \$A500,000), USA (USAID) and France, as well as through UNDP and UNV multilateral programmes.

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

Woodfuels are used domestically but the cost of diesel-generated electricity is very high. Plans to develop solar, wind and wave energies have not been implemented due to the considerable financial, technological and information related requirements involved.

7. INTERNATIONAL COOPERATION

Niue has very close links with New Zealand. (Niueans are New Zealand citizens).

Niue is currently a net importer of fish but, with investment in equipment, domestic needs could be met. Assistance in the fisheries sector is being supplied by UNDP/FAO, the Regional Fisheries Support Programme, the South Pacific Commission, the Forum fisheries Agency for International Development, USAID, and the International Commission for Ocean Development.

The report identifies two regional opportunities for sustainable development: (i) Explore possibilities for favoured trade status to encourage local agricultural activities; (ii) cooperate to develop a regional strategy to address problems rooted outside the region, for example drift net fishing.

8. EXPECTATIONS FROM UNCED

No specific mention

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PARAGUAY

<i>Full Title:</i>	National Report of Paraguay
<i>Date of Report:</i>	October 1991
<i>Original Language:</i>	Spanish
<i>Version:</i>	Final
<i>Other Language(s)</i>	English
<i>Total Pages:</i>	121
<i>National Contact Address:</i>	Ministerio de Agricultura y Ganaderia Subsecretaria de Recursos Naturales y Medio Ambiente, Dirección de Ordenamento Ambiental
 <i>UNDP Contact Address:</i>	 UNDP Resident Representative Casilla de Correo 1107 Asuncion, Paraguay Tel: (595-21) 449570 Fax: (595-21) 444325

1. DRAFTING PROCESS

National Committee: Editors & Authors:

Ministry of Agriculture and Livestock, Under Secretariat of Natural Resources And Environment

Other Ministries and Government Agencies:

No specific mention

NGOs, Grassroots Organizations and Public Involvement:

No specific mention

2. PROBLEM AREAS

- Soil degradation due to erosion by rain, wind and improper use of soils. There is lack of regulations and appropriate unpolluting technologies;
- Diminishing fauna as well as rare species due to indiscriminate hunting and habitat destruction;
- Excessive forest clearing together with an indiscriminate clearing of lands and the absence of territorial zoning;
- Water pollution due to industrial waste dumping and sewage infiltration and the problem of garbage disposal in urban and rural areas;
- Eutrophication of lakes and ponds due to materials leached from soils;

- Deteriorating biodiversity, genetic resources besides loss of forests;
- Insufficient rainfall in the western region in addition to increasing aridity;
- Indiscriminate hunting, loss of vegetable cover and forests due to overgrazing;
- Accelerating productive activities leading to the destruction of natural ecosystems;
- Rapid urbanization at Asunción and Ciudad del Este leading to environmental deterioration, air pollution and the destruction of green areas;
- Poor waste treatment facilities, increasing numbers of slums, noise pollution;
- Decreased replenishment of aquifers due to loss of vegetable cover, which also leads to erosion and even desertification;
- Over-exploitation of fish species;
- Improper handling of solid wastes and sewage discharge;
- Shifts in the habitats of wild aquatic species;
- Lack of adequate regulations and a weak administrative apparatus in addition to lack of funds;
- Deterioration of indian habitats due to migration.

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

- Laws exist prohibiting net fishing during the hatching season and the use of poisonous substances;
- A fish station has been set up to supply Tilapia alevins with a view to helping farmers diversify production and thus increase protein intake in their diets;
- Existing programmes relate to the regulation of exploitation of native forests and reforestation;
- Laws are being drafted for National Parks, Forestry and Environmental Impact evaluation by Congress;
- An agreement signed between the government and Bertoni Foundation to preserve the Mbaracayu forest;
- Protected areas have been set up together with Itaipu hydroelectric project;
- Two projects: "Geological map" and that of "Non- metallic mineral prospection";
- An existing plan and programme on the settlement of some 40,000 families by 1993 within the framework of agrarian reform;
- Ongoing projects like that of the port infrastructure improvement and "the Paraguay-Parana waterway Project".
- Studies on the construction of the "Ferrocaril de la Producción" are being undertaken;

- A Rural Code covering hunting;
- An Executive Power Decree No. 18796 of 1975 establishes fines for illegal hunting;
- Legislation on fishing and fish resources is currently being considered by Congress;
- Law No. 836 of 1980 forbids any activities that might lead to environmental degradation. Another law prohibits the import and use of toxic wastes;
- A National Committee for the Defense of Natural Resources was set up by Law No. 40 of 1990 to protect the ecosystem as a whole.

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

- Low polluting technologies should be adopted;
- The need for nations to commit themselves to live in peace and thus reduce military expenditure; funds released can then be allocated to high priority sectors;
- Need for a review of the foreign debt problem by industrialized countries;
- Solutions to combatting poverty is a prerequisite;
- Proper handling and consumption of resources;
- Need for stopping the destruction of vegetation;
- The ozone layer should be protected through the control of harmful emissions. The international agreement on toxic wastes needs revision;
- Promoting ways of attracting additional international funds;
- New criteria for the formulation and evaluation of sustainable development plans should be established; for mere adoption of the North's model of development does not always work; Imported technologies should be adapted to our ecosystems;
- Need for changing consumption patterns of the North to relieve the pressure on natural resources in the South;
- An International Agreement is of prime importance to attain sustainable development thus realizing higher levels of welfare and stability;
- Priority to farmers' organizations as well as adequate and timely credits;
- Institutionally, environmental strategies should be linked to socioeconomic development;
- Different plans and programmes to preserve natural resources; for developing and adopting permanent environmental information and monitoring systems;
- Strengthening health institutions in addition to improving both the technical and administrative systems and introducing decentralization;

- Updating health legislation and including regulations in the sanitary code;
- Adoption of fiscal policies which encourage production whilst discouraging speculation;
- The National Electricity Administration should give priority to the use of electric power where it is more likely to promote development;
- Promotion of a more efficient use of fuelwood in rural homes;
- Amending mining and tax legislation so as to promote investment in the mining sector;
- The Under Secretariat for Natural Resources and Environment should continue to study short and long term policies with a view to carrying out a survey on natural resources and implementing programmes which focus on the rational use of forest resources; drafting and amending current legislation;
- The need to implement the Forestry Reserve Management Programme in collaboration with the rural sector.

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

- More financial support is requested for reinforcing the work done by the Under-Secretariat of Natural Resources and Environment.

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

- Biomass and hydroelectric power are being promoted;
- Organic cultivation of fruit and vegetables (i.e. without the use of pesticides).

7. INTERNATIONAL COOPERATION

- A Uranium project developed by the National Government with the help of the National Atomic Energy Commission, the University of Asuncion and the International Atomic Energy Agency;
- Construction of Itaipu dam with Brazil.

8. EXPECTATIONS FROM UNCED

- Reduction of agricultural subsidies in developed countries with a view to improving terms of trade for developing countries;
- Striving to transfer less polluting technologies;
- Stopping foreign intervention in the development models of the South;
- Reinforce international cooperation so as to allow direct financing of both projects and programmes that focus upon sustainable development;

- Adopt the principle of shared responsibility in international relations on environmental problems;
- Strengthen the institutional set up needed for the protection of the environment; increase the role of NGO's in the resolution of environmental problems;
- Supplying technical and financial resources for environmental education programmes;
- Providing funds for the implementation of tree planting programmes to relieve the pressure on natural forests in addition to supporting reforestation;
- Formulating financial and technical cooperation programmes to improve the environment in rural and urban areas;
- Promoting "foreign debt exchange programmes" to widen the range of protected areas like wetlands and natural forests.

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 - 1.2 Objectives of the report
2. Description of the different parts of the environment
3. Social and Economic aspects
4. Diagnosis of the environmental problem
5. Sectoral policies and strategies
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7. Proposals for UNCED 92
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ROMANIA

Full Title: National Report
Date of Report: July 1991
Version: Final
Original Language: English
Other Language(s): -
Total Pages: 82 (plus 50 graphs, charts and maps)
National Contact Address: Ministry of Environment, Bucharest, Romania

UNDP Contact Address: UNDP Resident Representative
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 79362 Bucharest, Romania
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1. DRAFTING PROCESS

National Committee: Editors & Authors:

The foreword is signed by the Minister of Environment, Mr. Valeriu Eugen Pop.

Other Ministries and Government Agencies:

The report was written by a team of specialists drawn from the Ministry of Environment, the Ministry of Foreign Affairs, the Ministry of Agriculture & Foodstuffs, the Ministry of Industry, the Ministry of Health, the Ministry of Public Works & Physical Planning, the Ministry of Transports and Territory Administration, the Ministry of Economy & Finance, the Ministry of Education & Science, the Ministry of Trade & Tourism, the Ministry of Culture, the Ministry of Work & Social Protection, the Ministry of Youth & Sports, the National Agency for Private Property, the National Commission of Forecasting, Planning & Economic Conditions, the Headquarters of Statistics and various scientific institutes.

NGOs, Grassroots Organizations and Public Involvement:

"The Report has been distributed and debated together with the representatives of all political parties, members of the Parliament."

2. PROBLEM AREAS

- soil erosion process, caused by denudation of forests and by heavy rainfall; 4 m hectares were affected in 1989, a large part of which was agricultural land;
- soil chemical pollution from pesticides and from emissions from chemical or metallurgy industry (200,000 hectares are affected);
- compaction of soil and soil degradation, leading to as much as 50% decrease in crop yield;

- loss of arable land owing to salinity and swamp formation;
- water pollution, consisting mostly of chlorides, suspended matters, organic matters, ammonia or nitrates, phosphorus, cyanide and pesticides; 30% of waste waters remain untreated; Danube waters show high concentrations of phosphates, nitrates and ammonia ions, as well as the presence of oily films over large surface;
- air pollution mainly from the power sector, metallurgy, building materials and chemical industries; resulting acid rain degrades forests, contributing to drying of trees over large areas;
- air pollutants are concentrated in urban areas, especially where there is industrial activity; sulphur dioxide, nitrogen dioxide, suspended matters and ammonia often above maximum admissible concentrations;
- loss of sea shores as a result of rising sea level (3.2mm/yr);
- seaside erosion (70-80 hectares/yr) arising from hydrotechnical developments carried out inland and on the coastal area;
- considerable water losses in irrigation system;
- severe eutrophication has resulted from high concentrations of organic matters and nutrient substances in Black Sea, which in turn arises from harbour activity, from Danube River contribution and from domestic and industrial waste water discharge;
- irrational fishing and deteriorating environmental conditions have led to diminished fish populations;

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

- in 1990 the Ministry of Environment was created, with 41 agencies for environment monitoring;
- research on geothermal energy;
- construction of a large number of water storage reservoirs and diversions, including embankments, drainage systems and shore protection works;
- programme for residual gas treatment;
- anti-erosion measures taken on 2.2 m hectares, especially in hydrographic basins of the Arges, Dimbovita, Olt & Buzau rivers;
- extension of national parks and protected zones (eg. creation of Danube Delta Biosphere Reserve); reintroduction of species; natural habitat restoration;
- protection of beaches from erosion, including the building of dikes, artificial supply of sand and construction of protection jetties;

- periodic monitoring of fish stocks; recommendations for maximum admissible captures; measures for reducing destructive impact of fishing equipment;
- establishment of numerous laws, quality standards and decrees concerning the environment (pp 71-72);

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

- establish stronger national legislation and enforcement mechanisms
- evaluate the impact of certain public and private activities on the environment
- collect, co-ordinate and correlate data on the state of the environment
- assess and control major hazards caused by industrial activities
- conserve the natural environment
- improve the production process by introducing new technologies
- introduce "polluter pays" principle
- set admissible technical norms for nuclear radiation, toxic chemicals, hazardous wastes and the disposal & processing of residues
- reorganize industry to eliminate pollution, to increase efficiency and to reduce raw material consumption
- acquire non-polluting industrial equipment and devices to reduce pollutant emission

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

- In 1991, the Ministry of Environment spent in excess of 300 million lei (slightly more than US\$100,000 at Jan '92 exchange rate) on research projects on monitoring soil characteristics, water quality management, monitoring radioactivity, recovering residual waters and on the filtering of waste gases;
- financial support needed for the promotion of research programmes on biotechnology and for the implementing of measures to preserve biological diversity;
- development of monitoring and protection network for the Danube waters (estimated cost: US\$10 m for imports and 1 bn lei (US\$350,000) to be invested on Romanian territory);
- integrated environmental quality monitoring system (estimated need: US\$18 m for first stage, US\$26 m for second stage and internal contribution of US\$17 m);
- ecological recovery in areas of maximum anthropogenic impact requires US\$3 m to supplement 3 bn lei which will be provided by Romania;
- data bank on toxic chemical substances needs US\$5 m for importing hardware and software, with a Romanian contribution of 1 bn lei;

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

- 8 hydro-geothermal systems in operation, involving 59 wells
- biotechnological methods of eliminating pollutants from waste waters
- use of nitrogen fixation as an economic and non-polluting alternative to chemical fertilization

- need for plant with lower energy consumption in industry
- need for improved irrigation equipment to reduce losses

7. INTERNATIONAL COOPERATION

A number of initiatives have been taken:

- international programme of monitoring and control of the Danube River, which began as a result of the Bucharest Declaration of 1985;
- bilateral agreements have been signed with USSR, the Republic of Moldavia and Ecuador; a collaboration agreement has been signed with Germany and negotiations are in progress with other countries;
- in 1990 the Ministry of Environment paid fees to the following international organizations: United Nations Environment Programme, International Water Supply Association, International Association for Hydrotechnical Research, Organization for Economic Cooperation and Development, International Council of Hunters and Game Preservation, International Association for Seed Central, International Association of Forestry Research Institutes, International Association of the Fisherman, International Committee of the Great Dams, International Atomic Energy Agency and World Meteorological Organization.

Romania suggests an international programme for reducing pollution in the Danube basin, as well as a convention on Black Sea water quality between the countries of the Black Sea basin.

8. EXPECTATIONS FROM UNCED

- "the elimination of customs, commercial and technical barriers in the way of transfer of technologies specific to the protection of the environment";
- ensuring financial support from the developed countries to developing countries;
- limit emissions of greenhouse gases;
- encourage the use of biotechnologies;
- implement existing legislation, such as that on oil and chemical discharges from ships, or on the storage of substances in the sea;
- facilitate and support more regional conventions.

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SENEGAL

Full Title: Vers un développement durable, Rapport National
Date of Report: 1991
Version: Final
Original Language: French
Other Language(s): -
Total Pages: 117
National Contact Address: Ministère du Tourisme et de l'Environnement
 Dakar, Senegal

UNDP Contact Address: UNDP Resident Representative
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1. DRAFTING PROCESS

National Committee: Editors & Authors:

A National Committee comprising all economic sectors and the socio-professional groups was created and gave the drafting mandate to five commissions.

Other Ministries and Government Agencies:

The preface was signed by Mr. Abdou Diouf, President of the Republic of Senegal. The foreword was signed by Mr. Jacques Baudin, Minister of Tourism and Environment.

NGOs, Grassroots Organizations and Public Involvement:

NGOs, the business sector, unions, farmers, women's organizations, fishermen, youth and the scientific establishment as well as the universities have been involved in the process.

2. PROBLEM AREAS

- The natural environment is hostile and scarce resources in a precarious equilibrium are constantly threatened by a difficult climate and by droughts. Combined with human activity and demographic pressures, these conditions have led to a gradual degradation of the natural environment;
- Access to adequate water resources is difficult and often uncertain. In the last 20 years, annual rainfalls have been decreasing by one third and the Sahel zone has spread from covering 40% of the country to 60%;
- Soil quality is often poor, and soil degradation, acidification, desertification and erosion are major problems;

- Every year, 4.5 % of the country's forests are destroyed. Only 25 % of these are reforested. Land areas covered by forests decreased from 70 % in 1970 to 40 % in 1989;
- A worsening climate has also led to a loss of biological potential, biological productivity, and biodiversity, and has made continental fishing a marginal activity;
- Infrastructures and employment opportunities have not kept up with Urbanization. Urban pollution is on the rise;
- In the economic sector, the main problems are a bloated public sector plagued by budget imbalances, a shortage of savings, and a protracted and serious debt problem;
- In 1989 Senegal's total debt stood at US\$4.14 billion and debt servicing in 1990 was US\$534 million, the equivalent of 41.4 % of total exports. Debt/GNP ratio is 93.2 %, debt per capita is US\$574 while the per capita GNP is US\$616;
- Population growth is high, 58 % of the population is under 20;
- Cultivated land areas and per capita production are gradually decreasing. The country produces only half the food it needs. Farmers' revenues are insufficient and migration towards the city continues;
- Energy dependency is still an unresolved problem;
- Know-how and expertise in water resources, land, forest, agricultural land and waste management is needed.

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

- An existing National Population Policy with eleven strategies aims at increasing the standard of living and reducing mortality and morbidity among other things;
- Work is under way on the issue of combatting pollution and reinforcing Senegal's norms for environmental management so as to ensure the qualitative control of water, soil and air;
- The Senegal Peat Company, in collaboration with the Senegal Company On Oil (PETROSEN) aims at upgrading the use of selected energy resources;
- Several solar stations have been established at Noto (Thies region) and Diaoule. These stations provide power for water pumping and for the electrification of villages;
- Ongoing intensive afforestation projects of eucalyptus in an area of 6,000 hectares in Bandia (Thies region);
- Plans are under way for the implementation of an energy project at Manantali with the collaboration of Mali and Mauritania;
- Ongoing research by both the Research Centre on Renewable Sources of Energy and the Senegal Institute of Agronomic Research on renewable sources of energy;

- The "Organization for the Upgrading of the Senegal River" project which is under way, is aimed at saving about 150,000 tons of fuel oil as a result of its supply of hydro-electric power;
- A project is being carried out at Sassal for the production of biogas.

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

To implement the five priorities adopted by Senegal and the other OAU countries in the Bamako Agreement, the country needs to embrace the recommendations listed below.

Food Security:

- Provide adequate revenues for agricultural producers;
- Fight desertification with rational management of resources, increased protection of ownership/property rights, and access to credit for the producer/investor;
- Continue National Hydraulic Program to help agriculture.

Energy Security:

- Use exploitation zoning, quotas and reforestation plans for forestry;
- Diffuse more efficient burning technologies for domestic uses;
- Encourage exploration drilling and development of the country's hydroelectric potential;
- Use Senegal's special know-how on solar energy and favour alternative (bio-mass) and decentralized forms of energies to help rural electrification;
- Favour local and private investments;
- Adopt new taxes and abandon subsidies to discourage the use of non-renewable resources for energy production;
- Better telecommunications as a substitute for transportation;
- Promote and develop public transport.

Viable and Durable Employment Growth:

- Use taxes and incentives to stimulate new business ventures;
- Improve education and job training.

Security and Stability of Financial Resources:

- Tighten public spending and increase revenues through restructuring of the state;
- Reduce consumption growth, using taxes and levies, to the GNP growth level of 3.5%.
See "Financial Arrangements and Funding Requirements" below.

Improvement of the Quality of Life and of the Habitat:

- Adopt demographic policies designed to curb population growth;
- Improve urban infrastructures;
- Ensure more efficient urban pollution controls;
- Ensure water supplies, expanding distribution systems, by implementing full cost pricing of water and by enforcing the "polluter pays" principle;
- Protect coastal areas from erosion.

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

- Senegal will be unable to stop the gradual degradation of its ecosystems unless it is provided with substantial additional resources;
- Most investments have to be "productive" given the need to service the debt, which makes environmental concerns difficult to address;
- Debt repayment conditions and deadlines must be eased, new borrowing must be kept to a strict minimum, savings must be stimulated at home, and adequate prices must be paid for goods and products sold by the developing world on world markets (p 108);
- Estimates are provided on pages 115-116 of funding requirements for different proposed national projects.

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

- More improved stoves and ovens must be made available;
- Areas of interest include solar energy, wind-powered generators and more sophisticated pollution assessment and control techniques.

7. INTERNATIONAL COOPERATION

See "Financial Arrangements and Funding Requirements" above.

8. EXPECTATIONS FROM UNCED

Development is not an end in itself but simply a way to satisfy the basic needs of the population and to give the people a degree of freedom and dignity. The major obstacle to development and sustainable development is poverty. The solution to this problem requires a new international cooperation of the kind sought by UNCED.

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SINGAPORE

Full Title: Singapore's National Report for the
1992 UN Conference on Environment and
Development Preparatory Committee

Date of Report: 1991

Version: Final

Original Language: English

Other Language(s): -

Total Pages: 70

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1. DRAFTING PROCESS

National Committee: Editors & Authors:

The report was published by the Inter-Ministry Committee for the UNCED Preparatory Committee. The foreword was signed by Dr. Ahmad Mattar, Minister for the Environment.

Other Ministries and Government Agencies:

No specific mention was made of the composition of the Inter-Ministry Committee.

NGOs, Grassroots Organizations and Public Involvement:

Although there is no mention of NGO, grassroots organizations and public involvement in the drafting process, environmental and public health campaigns are carried out (pp 35-38) and a great number of NGOs play a big role in the environmental arena (pp 50-56).

2. PROBLEM AREAS

- Very limited resources, especially land. Built-up area accounts for 50% of all land area, whereas urbanization is being pursued intensively;
- Insufficient local clean water resources require water imports and water conservation measures;
- Singapore's shoreline is susceptible to oil-spill damage since Singapore is the world's busiest seaport in terms of shipping tonnage;

- Insufficient protection of nature reserves and bio-diversity leads to illegal trapping and trafficking of wildlife and endangered species;

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

- An anti-pollution unit and a Ministry of the Environment were formed in 1970 and 1972 respectively to control air and water pollution. In 1986, the anti-pollution unit was absorbed into the Ministry of the Environment;
- Legislation such as the Clean Air Act was promulgated in 1971 to ensure effective control of emissions, and measures on Vehicular traffic control were adopted;
- In 1973, a ban was declared on open burning of industrial trade waste;
- So as to reduce air pollution, the use of unleaded petrol was introduced in 1991 and sold at a lower price than leaded petrol (p 22);
- A new pilot refuse-sorting and recycling project in housing estates was set up. Moreover, Singapore's policy is to incinerate all incinerable wastes thus, two incineration plants have been established at Ulu Pandan and Tuas with a daily capacity of 3,600 tons (p 26);
- The Poisons Act and Rules in addition to the Environmental Public Health Regulations of 1988 handle the issue of toxic waste and hazardous substances;
- Due to water scarcity, a conservation tax imposed on water bills has recently been introduced. Factories are encouraged to recycle their water;
- A Tier Area Response Capability Committee was formed by the private sector to handle oil spills of up to 10,000 tons;
- Marine pollution is covered by the Merchant Shipping Act. Furthermore, sampling points have been set up at the Straits of Johor in addition to ten others at the Straits of Singapore;
- A series of campaigns on environmental education starting with "Keep Singapore Clean" in 1968 and ending with the "Clean and Green Week" launched in 1990 (pp 35-36);
- Major efforts have been deployed to make Singapore green, hence the creation of the "Parks and Recreation Department" by the government in 1976 to serve just that purpose. Moreover, 5 million trees and shrubs were planted along streets in addition to 12,546 fruit trees planted in public areas in 1985;
- Under a US\$20 million programme announced in 1991, four major water-body areas will be redesigned for greater aesthetic appeal and recreational potential (p 41);
- A 1990 reforestation programme was designed for areas affected by the construction of the Bukit Timah Expressway;

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

- Singapore faced a problem of rapid population growth in the 1960s. As a result, an extraordinarily successful family planning programme led to a lowering of the population growth rate to a mere 1.2% by the 1980s (p 18) and subsequently seemed headed for zero growth (p 44). Thus, one of Singapore's policy goals is now to increase the population growth rate (p 45). Greater population growth is needed to provide labour and markets for sustained economic growth, and to take care of the increasing percentage of aged people (p 45);
- More "cost-efficient" solutions should be found to the problem of unacceptable environmental constraints on land development;
- New "development strategies" should be established to match land supply with the housing, recreation and transportation needs and other desires of the new, more affluent generation of Singaporeans;
- Promotion of decentralization through the creation of regional centres;
- Efforts need to be deployed to set aside land for additional airport and seaport facilities, for housing and increasing the average living space of a Singaporean citizen from 20 m² to 30-35 m²;
- Maintenance of the current standard of 0.8 hectares of park land per 1,000 persons;
- Extension of the recycling and waste separation pilot programmes as the public's awareness grows;

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

No mention

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

Singapore wants to establish itself as a regional environmental technology and expertise centre for the Asia-Pacific region where the demand for environmental technology is booming (p 62). It hopes to collaborate with companies from the donor countries giving aid to developing countries for environmental programmes.

Singapore has experience in the areas of manufacturing, waste management, environmental impact studies, pollution control plans, environmental engineering, air and water control quality monitoring, and technical support services.

The Singapore Assistance Programme covers urban drainage, sewage treatment, refuse disposal and pollution control.

7. INTERNATIONAL COOPERATION

Singapore is a member of the Southeast Asian regional cooperation grouping (ASEAN).

ASEAN level environmental cooperation takes place within the framework of the ASEAN Environmental Programme (ASEP) which was first drafted in 1977 with the assistance of UNEP.

The ASEAN Committee on Science and Technology (COST) stimulated the creation of the ASEAN Senior Officials on the Environment (ASOEN, formerly AEGE), comprising Permanent-Secretary level representatives from each member country's Environment Ministry.

Within the framework of ASOEN, Singapore is Chairman of the Trans-Boundary Pollution Working Group.

Among others, Singapore is party to the Kuala Lumpur Accord, designed to contribute to ASEAN preparation for UNCED.

Within the framework of the Singapore Assistance Programme, Singapore offers training courses on environmental management in urban drainage, refuse disposal and many other topics. Furthermore, it hopes to be a regional environmental centre - a source of expertise and training - for the ASEAN region and also for the wider Asia-Pacific region.

8. EXPECTATIONS FROM UNCED

Singapore's Ambassador-at-Large to the United Nations, Professor Tommy Koh, was elected Chairman of the Preparatory Committee for UNCED by the United Nations General Assembly in March 1990.

Singapore hopes to share its experience with the other members of the international community (p 5) and intends to play a more prominent role in promoting and contributing to international cooperation on the environment (p 10). It hopes to be a bridge between the industrialized North and the developing South.

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SOLOMON ISLANDS

Full Title: Country Report for the 1992 UNCED Conference,
Solomon Islands

Date of Report: August 1991

Version: Final

Original Language: English

Other Language(s): -

Total Pages: 87

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1. DRAFTING PROCESS

National Committee: Editors & Authors:

A UNCED Task Force was established, consisting of representatives from the of majority government departments. The report was reviewed at Task Force meetings and presented to Cabinet for formal clearance and adoption. Technical assistance was received from a firm of consultants.

Other Ministries and Government Agencies:

The Task Force included representatives from the following Ministries and Offices:
Prime Minister's; Provincial Government; Agriculture and Lands; Natural Resources; Finance (Economic Planning); Tourism; Home Affairs; Health; Education and the School of Natural Resources.

NGOs, Grassroots Organizations and Public Involvement:

Non-governmental organizations were consulted including the Solomon Islands Development Trust, Soltrust, the Foundation for the Peoples of the South Pacific and church groups.

2. PROBLEM AREAS

- Solomon Islands are a double chain of islands along a NW-SE axis spread over some 1,400 km with a land area of some 28,000 sq km. Population increased from 161,000 in 1970 to 285,000 in 1986 and is projected to reach 470,000 by the year 2001.
- Loss of biodiversity and habitat: owing to high endemism, any substantial habitat loss is likely to result in extinctions (p 21). "Biological losses due to commercial logging are causing considerable concern ..." (p 24). Much of the coastal forest has been converted to plantations (p 31);

- Exotic species: cats, rats and cane toads are believed to be impacting negatively on native fauna;
- Climate change and sea level rise: concern focuses on the risk to coral atolls, impacts on the productivity of marine waters on which many societies depend, increase and frequency of tropical storms, changes in erosion patterns, and salination of freshwater supplies on low atolls;
- No effective protected areas system exists: designated sites have been neglected and degraded. There is a "... virtual lack of any viable and secure conservation reserves ..." (p ii);
- Lack of ecological and resource knowledge: urgent attention is required;
- Trade in wildlife: species including turtles, flying foxes, megapodes, coconut crabs and crocodiles require urgent action (p 23);
- Lack of appropriate environmental legislation and poor enforcement of existing legislation: the problem is recognized by FAO/World Bank as relating to customary land tenure (p 40). The only legislation covering terrestrial animals is the "antiquated" Wild Birds Protection Act (1914). There is no specific EIS legislation;
- Staffing and Manpower: "Progress on conservation planning strategies has been slow due to severe staffing problems." Many environmental issues go unattended owing to manpower shortages;
- Institutional weakness: the Ministry of Natural Resources is inadequately staffed; there is very little trained manpower in the area of environmental planning or EIA;
- Public awareness: the low level of awareness, at village level and amongst resource owners, inhibits both conservation and sustainable management;
- High population growth: at 3.5% (1976-86) the country has one of the highest rates in the world (p 18);
- Economic: existing policies relating to foreign exchange earnings drive resource over-exploitation. Depressed commodity prices are also a major constraint. In addition, employment is rising slowly (2.4%), less than population increase;
- Depletion of marine resources: over-exploitation occurs with respect to both commercial and artesial fisheries. Catches of skipjack and yellowfin tuna have been declining and there is concern over shells giant clams, beche-de-mer turtles and crocodiles;
- Sustainability of forests: at current rates, the resource is likely to run out in 10-15 years. Problems include lack of reforestation on customary land, lack of information, conflicts, loss of local resources, limited institutional capacity within the forest sector, loss of biological diversity, reduction of fauna and excessive logging of key species;
- Soil degradation: the problem is regarded as the main environmental issue facing sustainable agriculture (p.38). Expansion of village gardens often results in soil erosion and loss of fertility. Following population trends, the area of land under shifting agriculture has doubled over the past 20 years. Some areas have shown a shortening of fallow periods from 15 years to 6 months. Forestry operations are also cited as a cause of soil damage;

- Resource ownership: customary ownership of resources, often accompanied by disputes over utilization rights, is a major constraint to the solving of a range of environment and development issues;
- Urbanization: there is rapid immigration from all parts to the capital with services unable to keep pace with the inflow. Related problems include sewage and waste disposal, coastal pollution and leaching of polluted waters from waste dumps;
- Mining: concern has been expressed over potential water pollution from the Gold Ridge Mining Project and the lack of any suitable management plan (p 36);
- Pesticide misuse and overuse: concern is expressed over use in anti-malaria spraying and agriculture.

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

- The Environment and Conservation Division has been formed within the Ministry of Natural Resources;
- National Forest Resources Inventory (SOLFRIP) includes assessment of timber and non-timber resources. The three major environmental objectives are to:
 - identify, describe and map the major ecological domains;
 - identify and map major centres of biodiversity and areas of particular biological significance;
 - recommend those areas with potential for timber harvesting.
- Reforestation on customary land: a five year New Zealand funded aid programme;
- Pacific Eco-forestry Project: AIDAB funded, the project involves the walkabout sawmill and silviculture management;
- The Solomons has developed a National Population Policy;
- Tourism Policy: the policy states there should be only a moderate rate of development and makes specific mention of conservation requirements;
- Western Province Environmental Policy: the Provinces concern for environmental issues provides an example of the potential for provincial environmental regulation;
- Fisheries Policy (draft) aims at ensuring resource utilization on a sustained yield basis through wider participation of islanders. The draft includes guidelines for the tuna industry, inshore fisheries and aquaculture. Not only are large-scale fin-fish resources covered but so too are crustaceans, shells, turtles, coral, pearls and aquarium fish;
- The Regional Marine Turtle Programme has been undertaken jointly by the Division of Conservation and Environment and the Fisheries Division;
- The South Pacific Regional Environment Programme (SPREP)/Regional Environmental Technical Assistance Programme (RETA) is intended to provide assistance with environmental legislation, training and strategic planning;

- The Timber Control Unit, funded by AIDAB, will establish a well-staffed timber inspectorate based in the provinces;
- Draft environmental protection legislation is now awaiting further revision;
- The Mining Bill/Regulations and the Water Bill should empower the Government to enforce mining standards;
- The Forestry Bill relates to the protection, development and management of forests. The proposed Act recommends the instigation of a Forest Sector Plan (p 45);
- The Fisheries Act (1972) is undergoing revision, and should empower Provincial Governments to establish marine reserves and protect mangroves and coral reefs.

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

- Surveys of significant ecological resources and sensitive environments, particularly those not covered by the National Forest Resources Inventory;
- There is urgent need for a comprehensive survey of conservation area needs and priorities as little broad scale ecological studies have been undertaken;
- Surveys of marine environments coupled with fisheries population dynamics research. Regional research into pelagic fish shocks requires urgent attention;
- Drafting of appropriate and enforceable environmental legislation covering wildlife management, protection of significant environmental resources, pollution control and Environmental Impact Assessment;
- Enactment of the new Forestry Bill: Environmental and forestry legislation requires updating, particularly that relating to large scale commercial timber harvesting;
- Stronger implementation of regulations governing pelagic and artesanal fisheries are required;
- The extension of the Wildlife Management Area concept from Papua New Guinea to the Solomons, a system which brings together conservation objectives and traditional management;
- Identification of appropriate tourism opportunities including nature and cultural based tourism;
- Formulation of interim environmental planning policies, including guidelines for the assessment of new developments;
- Management of environmental information: there is a need to establish a widely accessible store and retrieve information system;
- The Solomon Islands has a very high degree of biological speciation (p 3) and endemism, the maintenance of such biological diversity requires urgent initiatives;
- The cabinet decision to pursue World Heritage Listing For Morovo Lagoon and Rennell and Bellona Islands requires allocation of resources;

- Establishment of a Land Ownership Commission and a Titles Registration System. There is also urgent need for registration or certification legislation relating to land tenure;
- There should be an independent body to co-ordinate environmental education and encourage grassroots environmental decision making;
- Improvement of resource use in village gardens: maximising use of trees cleared, rotational cropping and mulching;
- Development of a market for non-timber products;
- Increased funding for population management programmes;
- Development of alternative energy sources: solar power (partly through the removal of the 35 % import duty) hydropower, wind power and steam power fuel by plantation waste.

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

Since 1985 Solomon Islands have shown a widening current account deficit. In 1990 gross external debt stood at \$414 million, about equal to GDP (including non-monetary output). Government debt is negotiated on highly concessionary terms, interest payments totalled \$12 million.

Aid (1989):

- STABEX funding was estimated at SI\$22.8 million;
- EDF contributed SI\$15.6, three quarters of which were concentrated on the rural sector;
- Japanese aid totalled an estimated SI\$12.1 million;
- Australian aid (AIDAB) totalled around SI\$11.1 million (p 15). AIDAB is committed to reducing tropical forest loss and has established environmental criteria in order screen the funding environmentally harmful projects.

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

Solar power is used in rural areas but is hampered by a 35 % import duty.

Japanese aid funds several mini-hydro-schemes (p 9).

The potential for solar energy, wind power and biomass combustion is being explored.

7. INTERNATIONAL COOPERATION

The South Pacific Regional Environment Programme is now working with the government, and also funds the post of Senior Wildlife Ecologist.

The second draft of the Conservation Act is under preparation at the Kings College Centre for International Law, UK.

8. EXPECTATIONS FROM UNCED

No specific mention, but the summary lists UNCED's stated six main expected outputs: conventions, an Earth Charter, Agenda 21, financial resources, technology transfer and institutional strengthening.

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SOUTH AFRICA

<i>Full Title:</i>	Building the Foundation for Sustainable Development in South Africa
<i>Date of Report:</i>	October 1991
<i>Version:</i>	Final
<i>Original Language:</i>	English
<i>Other Language(s):</i>	-
<i>Total Pages:</i>	196
<i>National Contact Address:</i>	Department of Environment Affairs Private Bag X447 Pretoria 0001 South Africa
<i>UNDP Contact Address:</i>	N/A

1. DRAFTING PROCESS

National Committee: Editors & Authors:

The report was prepared by South Africa's National Research Council (CSIR) Environmental Services

Other Ministries and Government Agencies:

It was published by the Department of Environment Affairs

NGOs, Grassroots Organizations and Public Involvement:

There is no mention of NGO or public participation in the preparation of the report. But the report gives a selection of NGOs from the 89 private associations, clubs and societies devoted to nature and environmental conservation or the promotion of environmental awareness listed by the 1991 President's Council report.

2. PROBLEM AREAS

Air Pollution:

- coal and other fuel emissions are high (2 times world per capita averages);
- CFCs are high in marine air near Cape Point monitoring station;
- other sources: domestic, power generation, industry, motor vehicles.

Deforestation:

- over-exploitation;
- human settlement.

Soil loss & degradation:

- sheet & gully water erosion (overgrazing, removal of vegetative cover, bad tillage practices;
- wind erosion;
- acidification (acid rain, nitrogen-based fertilizers);
- compaction & crusting (intensive irrigation & mechanized cropping practices);
- salination (irrigation, effluent disposal);
- water-logging;
- low fertility (little crop rotation, over-fertilization).

Freshwater:

- low rainfall together with high evaporation in large parts of the country;
- eutrophication (caused by agricultural and urban run-off);
- salination (arises from repeated re-use of water & drainage from irrigated soils);
- inadequate water supply and sanitation, especially in rural areas; water-related diseases are an important cause of death.

Waste:

- from metallurgy & mining

Marine:

- decreased numbers of fish;
- oil spills;
- stormwater run-off;
- sewage & industrial waste water discharge points into the sea.

Desertification:

- caused by global climatological factors, concentration of livestock & overgrazing, uncontrolled woodcutting & deforestation, unwise tillage practices, unregulated burning and land clearance, incorrect water management, salination and sea water intrusion.

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

Institutional:

- The White Paper on Environmental Education of 1989 aims at stimulating educational processes that will develop environmentally responsible lifestyles;
- In 1984 the Council for the Environment set out procedures for integrated environmental management of development projects.

Air:

- Following the signing of the Montreal Protocol, the Department of National Health and Population Development has issued a policy for the protection of the ozone layer, in which the use of harmful substances will eventually be phased out;
- Smokeless stoves became compulsory in 1975;
- A particulate monitoring network was set up in the eastern Transvaal (1983);
- A law was passed requiring all new power plants or industries in the eastern Transvaal to have flue-gas desulphurizing equipment (1985);
- The Soweto Child Health Respiratory Study determines the impact of air pollution on the incidence of respiratory illness in children.

Water:

- The Water and Sanitation 2000 Group was established to improve water supply and sanitation for communities with limited resources and rising needs;
- The Department of Water Affairs and Forestry published " Management of the Water Resources of the Republic of South Africa" in 1986;
- A comprehensive river research programme has been launched to establish water and flow requirements in general and specifically to determine the needs of rivers flowing through the Kruger National Park. This research programme currently consists of more than 40 individual projects;
- A Water Research Commission has been created in 1971 to be in charge of the funding of research into South Africa's water resources, ways of improving use of water and reclaiming waste water and related topics through a levy on water use;

Conservation:

- An existing Endangered Wildlife Trust that includes 5000 supporters and 300 company sponsors, the aim of which is to conserve diversity of species in Southern and Central Africa (p 137);

Marine:

- The Oil Act (1981) sets out procedural guidelines in the event of oil spillage;
- Establishment of other acts protecting the seas, by controlling land-based and offshore discharges into the sea;

Soil:

- Finance was made available to farmers in periods of drought to maintain livestock, and to prevent the over-use of endangered rangelands;

- Legislation enacted to protect the soil;

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

President's Council recommendations (pp 153-182):

- Develop an appropriate set of criteria by which Environmental Impact Assessment should be undertaken as part of the integrated environmental management process;
- Introduce a system of atmospheric emission standards, comparable to industrial water pollution control;
- Combat air pollution from households, old burning mine dumps, leaded fuel, exhaust catalysts and dust from asbestos dumps;
- Develop a trans-national water management system;
- Need to enable legislation and appropriate administrative structures to ensure that authorities at all levels of government shall integrate environmental concerns into development action in both private and public sectors;
- A national network on air pollution monitoring in areas of concern is a high priority due to inadequate statistics on levels of air pollution;
- More emphasis on habitat and ecosystem protection rather than on the protection of individual plant and animal species;
- Need to formulate specific legislation concerning the conservation of high potential agricultural land;
- Stimulate scientific research and technological innovation through encouraging the development of substitutes for natural resources and a more environmentally benign production processes;
- Extending South Africa's Population Development Programme is required to halt population growth;
- Promote environmental education with a view to changing attitudes from a 'throw away' habit towards recycling through launching more public awareness campaigns;
- Encouraging the Department of Justice to take steps towards introducing environmental law into the syllabus of Public Service Law courses;
- A National Environmental Management Policy whose cornerstone should be sustainable development;

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

- Need for additional funds to further research prior to exploiting the possibility of artificial stimulation of rain;
- Financial support needed to enable institutions to conduct research into re-establishing vegetation in denuded areas;

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

- Promotion of the utilization of smokeless stoves since 1975

7. INTERNATIONAL COOPERATION

Has participated in the following international bodies:

- International Commission for Conservation of Atlantic Tunas;
- International Whaling Commission;
- Antarctic Treaty Organization;
- Commission for the Conservation of Antarctic Marine living Resources;
- London Dumping Convention (p 121);
- In January 1991 the ban on exports and imports of ivory was extended voluntarily in response to the UN Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (1989) (p 124);
- South Africa has a regional branch of the World Wide Fund for Nature whose task is to achieve conservation and ensure sound management of terrestrial and marine environment.

8. EXPECTATIONS FROM UNCED

No mention

9. TABLE OF CONTENTS FOR REPORT

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Introduction

The South African resource base

Patterns of growth and resource use in the South African economy

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SRI LANKA

Full Title: Sri Lanka National Report to the United Nations Conference on Environment and Development

Date of Report: September 1991

Version: Final

Original Language: English

Other Language(s): -

Total Pages: 170

National Contact Address: Ministry of Environment and Parliamentary Affairs,
Colombo, Sri Lanka

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1. DRAFTING PROCESS

National Committee: Editors & Authors:

The Report contains an endorsement by the President of Sri Lanka. Foreword by the Minister of Environment and Parliamentary Affairs, Mr. Vincent Perera and the Minister of State for Policy Planning and Implementation, Dr. Wimal Wickremasinghe. Preparation of the report was the responsibility of the newly constituted Ministry of Environment and Parliamentary Affairs (M/E&PA). The report preparation was supported by UNDP.

Other Ministries and Government Agencies:

The Advisory Committee, on the preparation of the report, appointed by the Minister of Environment and Parliamentary Affairs included the following:

- Minister of Environment and State Minister of Policy Planning and Implementation;
- Secretary, Ministry of Environment and Parliamentary Affairs;
- Secretary, Ministry of Environment;
- Chairman, Central Environmental Authority;
- About 8 other people with no official titles.

UNDP appointed a Consultant/Coordinator of the National Report (who was formerly Additional Director General of the Natural Resources, Energy and Science Authority [NARESA]). The Coordinator had to regularly report progress to the National Environmental Steering Committee, a high level inter-ministerial committee chaired by the Secretary, Ministry of Policy Planning and Implementation.

NGOs, Grassroots Organizations and Public Involvement:

Short-term consultants contributed papers in their respective areas that represented such topics as economy, croplands, water resources, forestry, energy, industrialization, urbanization, housing, legislation, education, tourism and women. Contributions were also received from other individuals that were not part of the official consultancy team.

A series of seminars was organized during the preparatory phase and participants came from the senior administration of the Government, NGOs (including those in the provinces), the media, and the general public. Contributions made by the participants in these seminars were taken into consideration. M/E&PA also placed a series of notices in the newspapers, in the national languages and English, inviting comments and observations from the public. Many responses were received in the weeks following the press notices.

2. PROBLEM AREAS

- Deforestation caused by shifting cultivation, timber exploitation, fuelwood, encroachment of agriculture on forests;
- Coastal and soil erosion;
- Pollution of water bodies, coastal ecosystems and beaches caused by the discharge of industrial pollutants and raw sewage;
- Sea-level rise, landslides, floods and other natural disasters, the victims of which are predominantly from the poorest segments of society, compelled to take the risk of occupying vulnerable areas;
- Siltation of irrigation and power reservoirs, river beds, lagoons and estuaries;
- Poor natural resource management;
- Atmospheric pollution from vehicle emissions and industries;
- One of the lowest GNPs per capita in the world and with the decreasing prices of commodities in real terms there is a constantly worsening balance of payments problem;
- Rapid growth in population and, hence, a sharp increase in unemployment;
- Urban expansion without concomitant infrastructural growth, resulting in proliferation of slums and shanties (pp 3-4, Executive Summary).

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

- In 1978, the Government sponsored a seminar on Environmental Management and Protection whose objective was to make recommendations on environmental issues. The Government accepted the recommendations that were made, and the main outcome was the drafting of the National Environmental Act (NEA). The Act was passed by Parliament and became operational in August 1981. It paved the way for the creation of the Central Environmental Authority (CEA) as the policy making and coordinating agency for environmental management (p 139);
- Creation of the Ministry of Environment and Parliamentary Affairs, of Cabinet rank, in March 1990;
- A National Steering Committee on the Environment was set up in the Ministry of Policy Planning and Implementation;
- Establishment of several NGOs, including over 150 at grassroots level throughout the island, whose primary objective is environmental protection (p 144);

Legislation:

Environmental legislation in Sri Lanka dates as far back as the middle of the last century. However, legislation dealing with environmental management in itself is of very recent origin. Some of the 80 statutes include the Land Development Ordinance, the National Water Supply and Drainage Board Law, the Coast Conservation Act, the Town and Country Planning Ordinance, the Fisheries Ordinance and a number of Pollution Control Laws (pp 145-152).

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

Environment:

- Institutional strengthening (regulatory, environmental, soil conservation, forestry, coastal management and mineral development);
- Enhancing scientific and technological capacity, including manpower training, in several fields (agriculture, forestry, industry, etc.);
- Enhancing capability in environmental fields (Environmental Impact Assessment preparation, pollution abatement technology, standards preparation, testing and monitoring);
- Strengthening environmental education;
- Review and revision of environmental legislation and effective implementation of the provisions of law;
- Enhancing the national effort in monitoring environmental changes and participating in international programmes aimed at mitigating man-made, global environmental degradation (pp 5 & 7, Executive Summary);

Development:

- Rapid industrialization through the private sector;
- Increasing electricity production, supplemented by thermal generation, selecting options with least adverse impacts on the environment;
- Enhancing productivity in the agricultural sector through improved management, crop diversification, afforestation, supported by appropriate administrative and policy initiatives and research and development inputs by the Government;
- Promotion of tourism and related activities;
- Building the necessary human resources and economic infrastructures;
- Implementing programmes and projects in water supply, sanitation, housing etc. to cope with the expected growth in urbanization (pp 6-7, Executive Summary).

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

It is estimated that approximately US\$245 million worth of donor financing was used on environmental related activities during the decade 1981-1991. Assistance ranged from outright grants to low interest long-term loans:

- In 1989 NORAD and Sri Lanka signed a three-year bilateral environmental cooperation programme amounting to US\$3 million. The programme covers such areas as institutional building, environmental education and awareness, environmental planning/research and National Conservation Strategy Development;
- USAID has funded such areas as Environmental Impact Assessment (EIA), Coastal Resource Management and Wildlife. In 1991, the Governments of the USA and Sri Lanka entered into a bilateral agreement for the implementation of the Natural Resources and Environmental Policy Project (NAREPP). One of the significant contributions under NAREPP will be the assistance granted to public voluntary organizations or NGOs that are active in the field of environmental conservation;
- The World Bank/IDA has supported Sri Lanka in the development of infrastructural capacity in areas like water supply, sanitation and refuse disposal. It is also co-financing with other donors, the Forestry Sector Development Project (FSDP). The World Bank also developed an Environmental Action Plan for Sri Lanka;
- The Netherlands have significantly contributed towards strengthening environmental capabilities locally in various fields. The financial commitment made by the Dutch Government for the period 1990-1992 is two million Guilders;
- The Asian Development Bank, the German GTZ and other donors like Finland, Britain, Denmark, Japan and Canada have also assisted Sri Lanka in several programmes relating to environmental conservation (pp 158-159).

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

Main sources of energy are fuelwood and other biomass (71 %), hydro-electricity (10%) and petroleum (19%). The country has over 300 biogas digesters, both in households and in farms. The main raw material for these units is animal waste (pp 76 & 77).

7. INTERNATIONAL COOPERATION

Among others, UNDP and its executing agencies (WHO, UNEP, UN Centre for Human Settlements and UNIDO) have been assisting the Government of Sri Lanka over the years to enhance capabilities in the area of forestry management, energy conservation, environmental health, industrial pollution management, disaster preparedness and landslide prevention. UNDP assistance has mainly centred around providing technical assistance and equipment grants to Sri Lanka institutions (p 159).

8. EXPECTATIONS FROM UNCED

Recognition of the fact that environmental degradation results from:

- high levels of development and use of natural resources (developed world);
- conditions of extreme poverty and serious financial limitations (developing world).

UNCED should explicitly recognize that environmental degradation in developing countries is a symptom of under-development and these countries are unable to mobilize required resources.

The World Community, at UNCED, should assume collective responsibility and take collective action to rid the world of environmental degradation and its causes.

Each nation has to make a fair contribution towards solving the problems relating to environment and development. The aforesaid should guide nations in drawing up the Earth Charter.

A specific agenda for action should be drawn up focusing on:

- areas of major global concern (e.g., the atmosphere, oceans, biodiversity);
- areas of concern pertaining to developing nations.

Developing countries should pledge to incorporate environmental safeguards in their development programmes, while rich countries should pledge to promote the economic development process through:

- increased resource flows;
- access to technology;
- assistance in manpower training and institutional capacity strengthening;
- fair terms of trade (pp 169-170).

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SWAZILAND

<i>Full Title:</i>	Ensuring Our Future: National Report of the Kingdom of Swaziland on Environment and Development
<i>Date of Report:</i>	June 1991
<i>Version:</i>	Final
<i>Original Language:</i>	English
<i>Other Language(s):</i>	-
<i>Total Pages:</i>	98 plus 4 appendices
<i>National Contact Address:</i>	Ministry for Natural Resources and Energy, Mbabane, Swaziland
<i>UNDP Contact Address:</i>	UNDP Resident Representative Private Bag Mbabane, Swaziland Tel: (268) 423 01/02 Fax: (268) 453 41

1. DRAFTING PROCESS

National Committee: Editors & Authors:

The report was prepared by a Preparatory Committee with widespread representation. The foreword was signed by Prince Nqaba, Minister for Natural Resources and Energy.

Other Ministries and Government Agencies:

A number of officials on the Preparatory Committee and the Editorial Committee, as well as the technical assistance team were from the Ministry for Natural Resources and Energy. Other represented ministries and government agencies included:

- Ministry of Agriculture and Co-operatives
- Ministry of Health
- Ministry of Education
- Ministry of Interior
- Central Statistics Office
- Economic Planning and Statistics
- Attorney General's Chambers
- Swaziland National Housing Board
- Swaziland Television and Broadcasting Service
- Water and Sewerage Board
- Swaziland Environment Research Project
- Rural Water Supply Board
- Water Resources
- Civil Aviation, Meteorology
- Geological Survey and Mines
- Phophonyane Nature Reserve
- Town Council of Mbabane

NGOs, Grassroots Organizations and Public Involvement:

Representation on the Preparatory Committee included the following:

- Consumers Association
- Council of Swaziland Churches
- National Assembly of the Bahai's in Swaziland
- NGO Assembly
- SABIL Foundation
- Swaziland Boy Scouts Association
- University of Swaziland
- Yonge Nawe

2. PROBLEM AREAS

- High population growth: 3.2% per annum between 1976 and 1986. This has resulted in depletion of natural forests whose wood is used in house construction and for fuel. Another consequence of population growth is soil erosion caused by over-utilization of land, poor conservation methods and overgrazing;
- Food security;
- Diminished vegetation due to:
 - overstocking;
 - perennial burning of the veld;
 - establishment of extensive agricultural schemes;
 - demand for firewood and building poles;
 - urban expansion;
- Ground and surface water contamination from agricultural activities (fertilizers, herbicides and insecticides) and industrial activities (pulp, paper and textile mills; photographic and dry cleaning industries);
- High prevalence of diseases such as typhoid, cholera, malaria and bilharzia due to inadequate sanitation, unsafe drinking water and inappropriate solid waste disposal methods;
- Air pollution from burning of fossil fuels, automobiles and "transboundary pollution from industrial areas of neighbouring states".

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

- The Ministry of Natural Resources and Energy was specifically created for the protection of the environment;
- An Adventure Trails Network exists for the protection of habitats and landscapes;
- The Forestry section of the Development Plan for 1991/92 and 1993/94, aims at protecting water catchment areas and halting soil erosion;
- Several land use programmes are carried out by the Ministry of Agriculture and Cooperatives so as to avoid soil erosion;

- Existing acts cover the control of land use in rural areas and the protection of forests and flora. Furthermore, a revised Game Act of 1990 increased penalties for poaching protected game;
- Other legislation deals with the control of waste water discharged from mining activities and the quality of water, air and food (pp. 57-62);
- A number of NGOs are adding an environmental dimension to their concerns, like the Africa Cooperative Action Trust which promotes rural development and agricultural projects. In addition, Asibonisane Bomake currently helps rural and urban women in various development projects;
- Numerous topics are being handled by different NGOs such as planned parenthood, sanitation programmes, developing vegetable gardens, recycling and forestry;
- Environmental education is provided through the National Curriculum Centre which developed an integrated course on development studies at junior secondary level as well as through teacher training colleges;
- An existing National Environmental Education Programme, founded by Mlilwan Trust, is in charge of providing informal education with a view to managing natural resources. One of the major activities is to facilitate and implement the national "Clean and Beautiful Swaziland" campaign (pp. 71-72);
- Private initiatives also exist with regard to the development of private game reserves such as Mkhanya Game Reserves for the protection of endangered species and Phophonyane Game Reserve for soil preservation;
- As an anticipatory measure to the problems of urbanization, the Government has, with the assistance of the World Bank, initiated a study, "Urban Development Project for the Provision of Infrastructure, Human Settlements Upgrading and Serviced Sites for Housing, Industrial Estate Expansion". This study examines the relationship between land use, and land suitability in accordance with the present population distribution patterns.

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

National strategies

Environmental education and training:

- encourage study tours;
- train environmental specialists;
- hold seminars and workshops throughout Swaziland;
- expand the integration of environmental education into the school curricula at all levels;
- expand the National Environmental Education Programme (NEEP);

Public participation:

- greater role for women in decision making at local, national and international levels;
- improve women's role through provision of credit, training, extension services and other productive resources;
- identify target groups in environmental programmes and encourage and support NGOs financially, technically and otherwise;
- encourage wide participation through the above environmental education strategies;
- maintain a component of public participation in environmental conservation projects;

Legislation and enforcement:

- review and revise all existing environmental legislation and recommend additional legislation;

Monitoring:

- create a mechanism for the systematic collection, organization and timely interpretation of data;
- acquire monitoring facilities;
- regularly monitor the importation and use of toxic substances;
- expand and improve the current climate monitoring system through training and additional equipment;

Improve environmental research;

Implement specific programmes in agriculture, nature reserves and parks/biodiversity, land resource management and in waste management;

Define policies to facilitate the achievement of the country's goals.

International strategies

- review international agreements;
- ratify existing global and regional conventions;
- enlist assistance from the international community to carry out research on how trans-boundary air pollution directly affects Swaziland;
- take an active role in negotiations for new global and regional conventions;
- strengthen cooperation with neighbouring countries in the sustainable use and management of transboundary ecological zones and natural resources;
- support the development and implementation of regional (AMCEN) and subregional (SADCC) cooperative arrangements for combatting common environmental problems;
- undertake environmental studies (global warming, emissions of ozone depleting and greenhouse gases) with the assistance of bilateral and multilateral agencies.

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

- More funds are needed to attain the goal of providing adequate water and sanitation by the year 2000;
- Financial assistance is required from the international community to fund research on how transboundary air pollution affects Swaziland.

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

No specific mention

7. INTERNATIONAL COOPERATION

- Agencies such as Peace Corps, UNICEF, USAID, UNDP, EEC, CIDA, WHO, World Food Programme and World Relief are giving strong support to community development activities and to private enterprise initiatives which have an important impact on the environment;
- FAO funded a follow-up report (1972) on the protection of worthy areas;
- Research is ongoing on the possibility of establishing a transnational reserve in the North-West and new Song-Imvelo Nature reserve in South Africa, as well as developing the transnational reserve with Mozambique, which will include Lubombo Nature Reserve and Maputo Elephant Reserve;
- USAID is currently assisting Swaziland to set up an Environmental Authority by providing a technical advisor responsible for the Environmental Authority;
- There is need to strengthen cooperation with neighbouring countries like South Africa and Mozambique so as to use and manage, in a sustainable manner, transboundary ecological zones and natural resources;
- The British Government has already financed a Hobbs Land Purchase Programme;
- A Tripartite Permanent Technical Committee had been formed by South Africa, Mozambique and Swaziland with a view to coordinating technical matters relating to water use and availability;
- The African Ministerial Conference on Environment became institutionalized, the purpose of which is to halt and reverse the degradation of the African environment so as to satisfy food and energy needs of the peoples of Africa;
- Eight specialized regional networks have been established in different domains such as environmental monitoring, climatology, soils, fertilizers, water and genetic resources.

8. EXPECTATIONS FROM UNCED

No specific mention, but see 4. Recommendations and Priorities on Environment and Development.

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SWEDEN

<i>Full Title:</i>	Sweden: National Report to UNCED
<i>Date of Report:</i>	June 1991
<i>Version:</i>	Final
<i>Original Language:</i>	English
<i>Other Language(s):</i>	-
<i>Total Pages:</i>	95 plus an Annex entitled "The Swedish Environment" (Swedish and English - 47 p)
<i>National Contact Address:</i>	Ministry of the Environment Stockholm, Sweden
<i>UNDP Contact Address:</i>	N/A

1. DRAFTING PROCESS

National Committee: Editors & Authors:

The Report has been drafted in accordance with the terms of reference laid down by the Preparatory Committee and in consultation with the Swedish National Committee for UNCED. The foreword was signed by Ingvar Carlsson, Prime Minister and Birgitta Dahl, Minister of the Environment.

Other Ministries and Government Agencies:

The Annex entitled "The Swedish Environment" is a summary of a more detailed publication in Swedish with the title "Hur mår Sverige?" (How is Sweden?) which was appended to the Government Bill (1990/91:90) to the Riksdag (parliament) on future environmental policy.

NGOs, Grassroots Organizations and Public Involvement:

No specific mention. Please see paragraph above which indicates extensive broadbased consultation.

2. PROBLEM AREAS

- Approximately 90% of the sulphur deposition and nearly 80% of the nitrogen deposition in Sweden comes from elsewhere, nitrogen from the west and sulphur from the east. Swedish emissions also affect other nations. Urban emissions of sulphur dioxide have decreased notably over the last two decades. Nitrogen oxides and nitrogen from ammonia both contribute to acidification.
- Acidification is the most severe problem in Sweden. Sulphur and nitrogen compounds are the main causes of acidification of soil and water. Sulphur deposition is in excess of the critical load almost all over Sweden. In southern Sweden nitrogen depositions also exceed the critical load.
- Changes in the agricultural landscape pose a major threat to the Swedish flora today. More than two-thirds of the species listed as threatened higher species of plants belong to the agricultural landscape. Agriculture accounts for one-third of the emissions of nitrogen to the atmosphere.

- Forests - In Sweden as a whole, approximately every fifth spruce and every seventh pine has at least 20% fewer needles than is normal. This corresponds to roughly 15 million m³ of forest annually. Plant and animal life is also changing in marshlands, deciduous forests and non-fertilized parts of the cultural landscape.
- Environmental pollution affects lakes and rivers (85,000 lakes cover a total of 9% of the area) owing to the climate and soil conditions.
- Hydrogen sulphide levels on the Gotland Deep of the Baltic are higher today than they have been at any time in the twentieth century. In addition, plant plankton has increased by 50% in the southern Baltic since the early 1950s, as a result of over-fertilization. Furthermore, new compounds similar to DDT and PCB are being discharged.
- Air pollutants degrade important buildings and monuments
- Other pollutants include:
 - oil spills
 - Volatile Organic Compounds (VOCs) which contain a number of carcinogens
 - radon, a naturally occurring radioactive gas associated with lung cancer
 - methane from landfills.
- Estimates indicate that the number of chemicals in commercial use in an industrial society is between 20,000 and 60,000. Some 1,000 of these account for more than 95% of all chemicals used.
- Domestic waste produced per capita increased rapidly in the 1950s and 1960s. Today "dustbin garbage" produced is 220 kg per capita, prior to recycling. Over 800 kg of waste per capita and year is produced by the manufacturing industry, excluding mining waste. It is estimated that 300 kg per capita of other industrial waste is produced annually. There are no reliable statistics available with regard to actual quantities of environmentally-hazardous waste in Sweden. There is no information available as to where at least 100,000 tonnes of the environmentally-hazardous waste goes.
- About 3 million people have noise levels outside their homes in excess of 55 dB(A) which is the target level adopted.

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

Extensive measures were initiated against water and air pollution in the 1950s and 1960s.

In 1909 Sweden introduced a law on national parks and a law concerning the protection of natural monuments.

Since 1952 a special law on shoreline protection has limited the right to build in such areas. The Nature Conservation Act, adopted in 1964, made it possible to establish nature reserves both on public and private land.

Environmental protection work in other sectors also started during the 1960s. A state authority - the Swedish Environmental Protection Agency - was established in 1967. The Environment Protection Act,

restricting water and air pollution and noise from industrial plants and other permanent installations, was introduced in 1969. Emissions from industries to the air and water have, in many cases, declined by between 65 and 95 % since the late 1960s.

The first major debate on hazardous substances began in Sweden in 1963. Local environmental groups were formed in many places in Sweden. The Swedish Society for the Conservation of Nature is the main environmental organization in Sweden today.

In 1966, the Swedish Environmental Research Institute was formed and has contributed to an increase in environmental expertise within industry.

In the early 1970s the Riksdag laid down guidelines for the use of land and water, providing, among other things, for the protection of certain coastal areas against exploitation.

Acidification was the first illustration of the fact that pollution can be transboundary. Since 1972, Sweden has worked actively to promote international cooperation in the field of environment.

Approximately 16,000 of the roughly 85,000 lakes in Sweden are acidified to such an extent that sensitive species have been damaged or eliminated. Nearly 6,000 lakes have been limed since the 1970s. This corresponds to three-fourths of the surface area of acidified lakes. In 1989, this liming treatment cost over US\$16 million. Only a small proportion of the lakes and rivers in the mountains have been limed and in these areas the situation has worsened over the past 10-15 years.

During the last two decades, environmental action in Sweden has been dominated by the implementation of clean-up measures and process changes in industry. Sweden began increasingly to use economic instruments as a supplement to rules and regulations in environment protection. Another important development is the increased decentralization of responsibility. In 1989, the municipalities were given considerably greater responsibility for monitoring and control under the Environment Protection Act, and also for waste management as of 1991.

Nature conservation in Sweden: 2.6 million hectares have been protected, corresponding to about 5.5 % of the land area of Sweden. Since 1967 the number of nature reserves has increased from 360 to 1,300 (from 25,000 to nearly 2,000,000 hectares in area). For the 1991/92 budget year, the allocation is US\$24 million.

In recent years, forestry methods have become better adapted to local natural conditions, and the size of clear-felled areas has decreased substantially.

Use of chemical pesticides in agriculture was to be halved between 1986 and 1990; this goal has now been achieved. A reduction by half again is to be attained by just after 1995.

Total global emission of CFCs in 1988 was over one million tonnes, of which Swedish emissions accounted for roughly 0.5 %. CFC use in Sweden has decreased to just over 0.3 kg per capita. CFCs were first banned in Sweden in 1979 and their use is to be eliminated by 1995.

Only one tenth of the halons consumed today are used in actual fire fighting. Some 25,000 tonnes of halons are used annually and Sweden accounts for roughly 200 tonnes. Halons have been banned in new fire extinguishers as of 1 March 1991.

Sweden's share of global emissions of carbon dioxide from combustion of fossil fuels is approximately 0.3 %. Emissions in Sweden have decreased by over one-third since 1970. As of 1 January 1990, a special tax of US\$0.2 per kg of carbon dioxide has been levied on petrol (and the same of fossil fuels as of 1 January 1991).

Recovery and recycling: Between 8,000 and 9,000 tonnes of iron and steel scrap were collected annually during the late 1980s. Automobile scrapping amounts to some 175,000 tonnes.

Eco-labelling is being introduced in Sweden and other Nordic countries.

Nuclear reactors will have produced 13,000 m³ of high level waste by 2010. The Riksdag has adopted a decision to phase out nuclear power in Sweden by no later than 2010. The Riksdag has also adopted a decision to protect four of Sweden's major rivers from exploitation.

Extensive deregulation is taking place within Swedish agriculture. Former subsidies that led to surplus production and resulted in various types of environmental impact are being completely abolished.

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

- In order to modify behavior in an environmentally favourable direction, increased knowledge and changed attitudes are required in everyday life.
- When it is difficult to identify the polluter, a collective responsibility to restore the environment must be applied instead of applying the Polluter Pays Principle.
- One of Sweden's objectives is the halving of nitrogen leaching from agriculture by the year 2000.

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

- In conjunction with the reform of the Swedish tax system, SEK 18,000 million have been transferred from the taxation of income to the taxation of energy and emissions. Investments in more environmentally sound energy and traffic systems are also increasing at the expense of general consumption;
- Sweden makes considerable contributions to development assistance programmes (see 7. International Cooperation).

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

The Stockholm Environment Institute (SEI) is to stimulate development and dissemination of new technology that contributes to solving or reducing different environmental problems. The Institute has started work on, among other things, questions concerning biotechnology in agriculture, technology for adaptation to climatic change and the global energy surplus.

7. INTERNATIONAL COOPERATION

Article 21 of the Stockholm Declaration has come to constitute the basis in international law for negotiations and agreements aimed at limiting or eliminating transboundary air pollution. One example of this is the "Nordic Environment Protection Convention" of 1974. Another is the Convention on Long-Range Transboundary Air Pollution, signed in Geneva in 1979.

Under the ECE Convention on Long-Range Transboundary Air Pollutants, there is an agreement not to increase emissions of nitrogen oxides. Twelve nations, including Sweden, have undertaken to decrease their emissions by approximately 30% by 1998. The ECE convention on environmental impact assessments in conjunction with transboundary pollution was adopted and signed in Esbo, Finland, in February 1991.

"In 1988, the Swedish Riksdag reached a decision that Swedish development assistance should also incorporate environmental goals. Within the overall goal of development assistance - that of improving the standard of living of the poor - the environment goal should supplement and reinforce the other goals. The environment is thus not regarded as a separate sector. Swedish development assistance is entirely based on the realization that sustainable development can only be achieved through the far-sighted management of natural resources and concern for the environment."

In 1990 "the Riksdag decided that SEK1,000 million (US\$180 million) [US\$ = 5.50 SEK, Jan 92], were to be used for cooperation with eastern and central Europe during the three year period from 1990/91 to 1992/93, of which SEK 900 million were to be financed via funds allocated to development assistance. About SEK 400 million is expected to go to environmental cooperation."

"In the developing nations, the major threats to the environment and natural resources are often related to poverty." "It is therefore of global interest that the developing nations be given increased opportunities of managing their environments and their natural resources in a sustainable manner." Sweden is therefore working actively in international fora towards the OECD nations also fulfilling the UN target of 0.7% of GDP in development assistance.

Sweden will be contributing over SEK 60 million during 1991 to UNEP, UNDP and the World Bank's special environmental fund, the Global Environment Facility.

SIDA is carrying out a joint study with IIED on the relationship between poverty, the environment and development. The Stockholm Environment Institute (SEI) has elucidated particular issues on industry and the environment, as well as the complex problem associated with the transfer of environmentally sound technology.

In addition Sweden has initiated action in the United Nations relating to military activities and the environment.

8. EXPECTATIONS FROM UNCED

Swedish contributions to UNCED: The Swedish preparatory work includes the drafting of various studies, some at the request of the UNCED Secretariat. The studies cover relationships between poverty and the environment, industry and the environment as well as the relationships between economic development and the environment. A study has been carried out on new and renewable sources of energy for sustainable development. Sweden has also provided funding to the UNCED Secretariat for the preparation of national reports.

The Stockholm Initiative: The Stockholm Initiative on Global Security and Governance, a conference around a document entitled "Common Responsibility in the 1990s" (April 92), is an appeal to the governments to demonstrate their resolve in making UNCED a breakthrough for achieving sustainable development through action-oriented and forward-looking decisions.

Sweden believes that:

- The Earth Charter should be brief, concise and unambiguous, describing the rights and obligations of nations and of individuals and groups.
- Agenda 21 can become a valuable tool and should build on principles expressed in the Earth Charter. Agenda 21 is well suited to action plans in various sectors. In a decentralized fashion, all relevant UN organizations should participate and the responsibility of governments should be clearly defined. The implementation will require some form of monitoring and control.
- Financial resources - Sweden is of the opinion that the Global Environment Facility available through the World Bank, UNDP and UNEP constitutes an attractive institutional arrangement. Expansion of the GEF mandate to cover other global environmental problems should be considered. Regional Development Banks should be further developed and strengthened. Further transfer of resources should be based on a fair distribution of the burden amongst the donor nations. Innovative methods of financing must be considered.
- Technology: The transfer of environmentally sound technology on advantageous terms will probably not be a decisive condition. Probably the most important factor here is to develop the ability to take effective advantage of environmentally sound technology, through capacity expansions. UNCTAD should contribute to UNCED by making studies. The transfer of environmentally sound technology should include technology management i.e. reception capacity. Sweden has formed an international institute for environmental technology, the Stockholm Environment Institute (SEI) to stimulate development and dissemination of new technology.
- Institutions: Expand on existing institutional arrangements, focused on efforts within the UN system. The preparations for UNCED should lead to proposals on how the UN system can be strengthened to make the UN organizations more decisive. The current reform efforts within the UN should be taken into account.
- The Conventions on Climate Change and on Biological Diversity should be ready for signature at the Conference.

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ANNEX: THE SWEDISH ENVIRONMENT

TOKELAU

Full Title: Tokelau Country Report for the United Nations Conference on Environment and Development
Date of Report: 1991
Version: Final
Original Language: English
Other Language(s): -
Total Pages: 57
National Contact Address: Department of Agriculture and Fisheries
 Office of Tokelau Affairs

UNDP Contact Address: UNDP Resident Representative
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1. DRAFTING PROCESS

National Committee: Editors & Authors:

The report was written by three consultants.

The preface is signed by the Director of the Department of Agriculture and Fisheries.

A UNCED National Task Force was set up. After Task Force discussion of the draft, the final report was approved by the three Faipule and the Official Secretary. Financial assistance for report preparation was provide by UNDP, through the South Pacific Regional Environment Programme (SPREP).

Other Ministries and Government Agencies:

The task force included:

- representatives from various administrative departments of the Office of Tokelau Affairs:
 - Agriculture and Fisheries
 - Public Works
 - Economic Affairs and Information
 - Administration
- the Councils of Elders of various atolls

NGOs, Grassroots Organizations and Public Involvement:

Visits were made to villages and projects on the main islands.

2. PROBLEM AREAS

The major problems facing Tokelau are:

- The threat of global warming: Tokelau's highest point is 5 metres above sea level. The atolls are threatened by freshwater salination, increased storms, coastal erosion, decline in fishing potential, ecological disturbance to reefs, droughts and sea over-wash. Worst case scenarios suggest Tokelau may cease to exist;
- There is a lack of knowledge about the carrying capacity of the atolls. Increasing population accelerates emigration to New Zealand. Total population is stable at 1,700, with 4,500 Tokelauns living abroad;
- Influence of Western cash and values undermine traditional practices. The desire for western commodities is threatening the fragile atoll environment.

The following are listed as constraints to sustainable development:

- Dialogue for sustainable planning relies on agreement between 3 groups: (i) the three local councils and the General Fono, (ii) The Public Service and (iii) the community. The differential in the technical base between "community leaders and the TPS [Tokelau Public Service] poses difficulties". The knowledge differential between the Public Service and community leaders is regarded as the most serious social constraint. There is a reluctance to endorse initiatives which are not understood or have the potential to shift control away from local authorities/community leaders;
- Insufficient information exists about natural resources and management, in particular on lagoons and reefs, fisheries, freshwater lenses, environmental impact of projects, climate change impact, appropriate energy sources and waste disposal;
- The most serious technical barrier relates to planning responses relating to global warming. Technical problems include accurate local prediction, developing environmentally sound protective measures against sea level rise, finding options for food production in increasingly saline conditions, understanding groundwater dynamics and salination;
- Coordinated environmental management is costly. There may not be sufficient or consistent budget allocation given to environmental planning and projects.

Other problems outlined include:

- Health risks from modern changes such as diet, reduced exercise, alcohol and smoking;
- Lack of Environmental Impact Assessment (EIA) and an insufficient legal framework dealing with conservation. In addition, there is poor integration of environment and development;
- Institutional capacity building initiatives are constrained by (i) the dual authority structure; (ii) insufficient skilled staff; (iii) funding;
- Removal of beach sand and coral (living and dead) for sea walls and buildings, is causing lagoon siltation and shore erosion;
- Shortage of information and expertise to identify environmental problems;
- Deterioration of tradition skills/knowledge is having a negative effect on marine resources;

- Lack of environmental awareness at local level, and poor information flow;
- No facilities for toxic waste disposal. Buried waste (batteries, hospital refuse, chemicals, etc.) leaches into lagoons;
- Preservation of coral reefs is threatened as there are no protected areas on Tokelau;
- Toxic waste disposal and nuclear testing in the Pacific.

(For complete list see tables on pp 44-50 of the report)

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

- The Tokelau Public Service, instituted by the New Zealand Government in 1976, now provides employment for 10% of the population;
- UNDP Integrated Development Project has funded a Rural Development Officer to facilitate local institutional building and strengthen self-determination;
- The Tokelau Framework Development Plan, 1989. The Plan is reported "not to have integrated environmental considerations with development planning";
- Government facilitates the onward sale of handicrafts;
- Agricultural chemicals have been banned since 1983, an action intended to prevent damage to lagoon ecosystems;
- Resource studies have been undertaken on tuna, baitfish, turtles, crabs, coral, bottom fish and beche-de-mer; findings need to be incorporated into local decision making;
- Marine Resources: trocus transplants have been successful; turtle, clam and pearl oyster cultivation is being explored;
- Fisheries protection programmes include control of size of net sold in stores, ban on harvesting of endangered species: turtles on Nukunonu, clams on the three atolls and development of deep sea tuna to alleviate pressure on lagoon/inshore species;
- Value adding in the offshore fishery is being pursued with the development of a small scale tuna jerky enterprise;
- The Agricultural and Fisheries Committee, 1984, advises and informs the Fono/Elders on environmental and resource management;
- Marine conservation education is being introduced into the school curriculum including instruction by Elders;
- SPREP publications have been translated to promote awareness but more environmental teaching aids are required;
- The Housing Project, begun mid 1980s, has greatly improved drinking water and reduced skin and diarrhoeal diseases;
- The Mosquito Control Programme involves collection of containers, tins, etc;

- Building of sea wall/protective structures to respond to increased storm activity and sea level rise. (No EIA carried out, see section 4);
- Protected Areas Study has been carried out, UNDP funded (see section 5).

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

Widespread recommendations are made (see pp. 51-53) including:

- Greenhouse issues: re-evaluate sea-wall project; gain assistance - financial and technical for a better understanding of climate change; consider cultural sustainability in the event of forced emigration;
- Sustaining the culture: define social goals in relation to western and tradition lifestyles; document traditional culture;
- Improving health: undertake community education regarding risks of poor diet, alcohol and tobacco; examine methods for encouraging consumption of better quality foods; determine cause of fish poisoning; continue the Dengue Fever Prevention Programme and public health monitoring;
- Water resources: identify potential changes to ground water; develop a sewerage system consistent with water and nutrient needs; increase water reserves;
- Marine resources: develop a strategy to lessen misuse of western technology; continue management of endangered species; continue development of a deep sea fishery; enforce net regulations; monitor fishing and stocks; promote traditional knowledge;
- Land resources: investigate means of improving soil fertility with sewage; maximise use of traditional cultivation methods;
- Energy: develop an energy policy and related conservation practices; investigate renewable energy supplies;
- Protecting biodiversity: develop a Lagoon/Reef Profile and Conservation Strategy; establish protected areas (land/marine); regulate exploitation of endangered flora and fauna;
- Maximising economic self sufficiency: pursue commercialization of the tuna industry; investigate aquaculture potential; maximise budgetary assistance for long term benefits;
- Environmental planning and management: develop legislation, organizational structures and procedures; ensure all aid projects are subject to appropriate environmental and social assessment;
- Waste and pollution management: develop a waste management strategy;
- Demographic issues: develop population growth policy and promote control measures;
- Regional issues: lobby at international fora against:
 - nuclear testing and toxic waste dumping in the South Pacific;
 - practices leading to global warming.
- Support international mechanisms regulating fishing, pollution and shipping.

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

"Tokelau is now locked into dependency on budgetary assistance, aid and remittances to maintain current lifestyles." In 1990, budgetary assistance/aid totalled NZ\$4.1 million (approximately US\$2.2 million at January 1992 exchange rate) or NZ\$2,426 (approximately US\$1,250.50) per capita. Remittances were around NZ\$0.2 million (US\$0.11 million) annually, NZ\$120 (US\$65.20) per capita.

Coordinated environmental management is costly, more budget allocation is necessary to establish an effective long term system (amount unspecified).

Tokelau seeks additional assistance to promote better understanding of climate change impacts.

In keeping with Resolution 11 of the Fourth South Pacific Conference on Nature Conservation and Protected Areas, 1989, UNDP funded a reconnaissance study which investigated the introduction of the concepts of conservation and protected areas.

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

There is "tremendous scope" for investigating alternatives to reliance on petroleum products and wood, for example solar power.

There is a need to find alternatives to waste burial and to ground seepage disposal of sullage and sewage.

Advice is urgently needed on environmentally sound household products, sewage and solid and toxic waste disposal. Re-cycling, minimisation of waste production and land application of sewage all require consideration.

7. INTERNATIONAL COOPERATION

Tokelau has developed strong regional links through SPREP.

8. EXPECTATIONS FROM UNCED

No specific mention

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TURKEY

Full Title: Turkey: National Report to UNCED 1992
Date of Report:
Version: Final
Original Language: English
Other Language(s): -
Total Pages: 194
National Contact Address: Ministry of Environment, Ankara, Turkey

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1. DRAFTING PROCESS

National Committee: Editors & Authors:

The National Committee comprises the ministries mentioned below the coordinating authority was the Under-secretariat for the Environment. The Foreword is jointly signed by the Prime Minister, Mr. Mesut Yilmaz and the Minister of Environment, Mr. Ali Talip Özdemir. Minister.

Other Ministries and Government Agencies:

The following ministries were involved: The Prime Ministry (through the Under-secretariat for the Environment, the Under-secretariat for the Treasury & Foreign Trade and the Under-secretariat for the State Planning Organization), the Ministry of Foreign Affairs, the Ministry of Finance & Customs, the Ministry of Public Works & Settlements, the Ministry of Health, the Ministry of Agriculture, Forestry and Rural Affairs, the Ministry of Industry & Trade, the Ministry of Energy & Natural Resources, the Ministry of Tourism and the General Directorate of State Meteorological Affairs.

The various ministries were organised into working groups, details of which are given on pages D2-D5 of the report.

NGOs, Grassroots Organizations and Public Involvement:

Sixteen NGOs participated directly in the drafting of the report, and are listed on page D4-D5. In addition, the report "has been presented to public bodies and to interest groups".

2. PROBLEM AREAS

- The fish populations in several regions have been reduced by water pollution (e.g. int pollution along the Marmara Sea coast and land-based pollutants affecting the Black Sea`

- Urban problems include the high concentration of dwellings, the poor quality of fuels used for heating and unplanned settlement (about 30% of urban dwellings consist of shanty towns; also, 65% of settlement in Ankara is unplanned);
- Industrial wastes are an important constituent of water pollution; most industries lack waste treatment facilities and existing ones are often inadequate;
- The main air pollutants stem from industrial plants, from the use of cheap but highly polluting fuels and from motor vehicles;
- Soil erosion occurs under the action of water and wind, affecting coastal sand dunes as well as inland areas (a total of 500 m tons of soil is lost annually);
- Forests are threatened by fires, by harmful insects and diseases, by the claiming of agricultural land, by unplanned settlement, by soil erosion and by emissions from industrial plants;
- Problems associated with tourism include disturbance of the ecological balance (for instance, marine turtles in Köycegiz Lagoon), air, marine and noise pollution through increased traffic and damage to historic sites;
- Water supply sewerage systems are inadequate;

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

- Establishment of the Building Law No. 3194 to control the process of urbanization. Other achievements include the ending of the practice of shared land ownership documents and the introduction of regional planning as a legal concept;
- 65 water sampling stations in 1979 were extended to include 679 stations in 1989;
- Study effectuated on the improvement of lignite as a fuel, on the use of cleaner fuels and on the use of heat isolation to ensure economy of fuel;
- Measures to control wind erosion are in force in the Karapinar village of Konya and in the Kayseri-Develi area; research studies focusing on other areas (Kars-Aralik area and the Black Sea region) are ongoing;
- Afforestation programmes are continuing in burned or destroyed forest areas. Trees are being planted that are resistant to industrial emissions. Erosion control measures covered over 80,000 hectares in the period 1986-1990. Precautions have also been taken against forest fires;
- A set of laws are in force to regulate the management of waste, as well as to control the import of environmentally dangerous substances (page B123-B124; see also page C10-C12 of the report);
- Metal, plastic and plastic waste materials are recycled as raw materials; in 1985, 3,086 tons of glass was recycled at the Çayirova Glass Factory;
- In Bafra and Giresun regions, agricultural and forest wastes are turned into briquettes for use as fuel in stoves. Compost plants are also in operation to convert refuse into fertilizer and into industrial raw material inputs;

- The Ministry of Agriculture, Forestry and Rural Affairs is carrying out projects on agricultural chemical residues contained in foodstuffs and on the amounts of chemical wastes contained in the sea and in enclosed bodies of water;
- The Under-secretariat of the Environment is carrying out a "Project to Determine Priority Chemicals in Turkey". The 1991 plan includes additional projects on the environment: Project on the Research of Phosphate Stemming from Detergent in Turkey's Surface Waters; Project on the Directive on Dangerous Waste Protocol and its Implementation; Project on the Directive of the Control of Dangerous Wastes; Project on the Control of Chemical Materials; Environmental Pollution Reference Library Project; Industrial Establishment Waste Inventory Project and the Dangerous Waste Processing Plant Project
- Projects proposed for 1991 under MEDSPA cover pesticide pollution, the codifying of chemicals, and the management of dumping grounds;
- Within the scope of the METAP Programme, projects have been proposed for 1991 on the management of dangerous wastes (Marmara Region) and on the control of import and export of dangerous materials;
- By 1990, some 40 conservation plans for the protection and restoration of cultural and historical assets have been implemented;

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

- Assuring public awareness and participation in efforts to protect the environment;
- The drawing up of an agreement between countries that share resources like seas and the Meric and Danube Rivers;
- The exchange of information on environmental matters, on national and international levels, along with the development of scientific and technical cooperation;
- The informing of consumers about the environmental impacts of industrial products through labelling, the use of logos and product declaration;
- The setting up of facilities for the storage or destruction of dangerous wastes;
- The fostering of research on the recycling of harmful wastes;
- The training of manpower on the topics of waste management and toxicology;
- Environmental factors should be taken into account when making decisions on the use of chemicals in industry;

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

The World Bank finances a number of projects related to the environment-development field:

Istanbul Water and Sewerage Project (1987); the Izmir Water & Sewerage (1987); the Ankara Water & Sewerage Project (1990); Southern Antalyn Tourism Infrastructure (1976); the Çukurova Urban Development Project; the Forestry Project (1978); the Agricultural Sector Harmonisation Project (1985); the Drainage and In-Field Development Project (1986); the Energy Sector Harmonisation Credit (1987)

enabled the establishment of an environment department within the Turkish Electricity Board; grant received to fund a feasibility study of the Southwest Coasts Environmental Project and the initiation of Environmental Programme for the Mediterranean.

The Mediterranean Environmental Technical Assistance Project financed two programmes in 1990 on coastal management totalling US\$470,000.

OECD initiated the "Review of Environmental Policies In Turkey" in 1990, and donated funds adding to Turkey's contribution of LT two billion.

The EC has provided ECU 2,800,000 to Turkey's contribution of ECU 585,000 for a project on measuring, observing and controlling environmental pollution.

The Council of Europe Social Development Fund has supported: the Project to Improve the Living Conditions of the Medium and Low-Income Groups Living in Metropolitan Areas (US\$100 million credit between 1985-1988); the Istanbul Waste Water & Discharge Facilities Construction & Water Treatment Project (US\$89 million in credit obtained in 1988); the Istanbul Streams Improvement Project (credit of US\$45 million obtained in 1988); the Tuzla Organized Leather Industry Zone Waste Water Purification Plant Project (US\$10 million in credit received).

In 1991, applications have been made for: Waste Management Project (Marmara) - US\$ 350,000; Project on Control Systems for the Import & Export of Dangerous Materials - US\$70,000; Medgeobase Project - US\$200,000; Project for the Conservation of the Menderes Delta - US\$300,000; Istanbul Environment Project - US\$350,000.

Table C.III.1 on page C14 gives data on national expenditure on environmental research and investment projects in various sectors.

Turkey will contribute SDR 4,000,000 to the Global Environment Facility over eight years.

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

The Sixth-Five-Year Development Plan encourages the use of artificial insemination, of high-yield seeds and of high productivity strains for breeding of animals.

Research on solar energy potential and use continues; the use of panels to heat water is becoming widespread in the southern part of the country.

The South Eastern Anatolia Project (GAP) region is becoming a significant producer of hydroelectric power; after completion of plants that are now under construction, installed capacity will be 5960 MW, or 25 % of the country's electricity. Geothermal energy is also exploited.

To keep the use of chemicals to a minimum, birds and red ants have been used to control populations of harmful insects.

7. INTERNATIONAL COOPERATION

Turkey participates in the activities of international organizations such as UNEP, UNDP, OECD, NATO, EC, ECE, IUCN, WWF, WHO, WB and CSCE. Projects financed by the World Bank, OECD and by METAP are listed under item 2).

UNDP established a number of projects between 1980-1991: International Cooperative Research on Low Calorie Solid Fuels Technology; European Cooperation on Environmental Health Aspect of the Control of Chemicals; Conservation and Exchange of Crop Genetic Resources; Control of Toxic Chemicals; Environmental Planning & Management of Air Pollution; Mediterranean Environmental Management Centre; Environmental Protection & Tourism Development; Integrated Resources Recovery from Municipal Solid Wastes in Europe.

UNEP has established a number of projects: Izmir Coastal Zone Management Programme; Iskenderun Bay Environmental Management Project; Study on "National Strategy for the Conservation of the Mediterranean Monk Seal"; technical assistance for the preparation of the National Contingency Plan and a pilot project on soil erosion problems.

The Turkish Atomic Energy Agency takes part in international gatherings on nuclear issues with the GATT, the OECD and the International Atomic Energy Agency.

8. EXPECTATIONS FROM UNCED

Resolutions are expected to be made at the Conference on the following:

- "responsibility of every country for the pollution and degradation of the environment and exhaustion of natural resources differs ... this Conference must be the starting point for the industrialized countries' reversing the net flow of resources in favour of developing countries, in proportion to their levels of development";
- new financial mechanisms are required to generate additional resources to maintain a sustainable development path; countries should contribute a share of their GNP according to their respective levels of employment;
- improve the structure of the UN to facilitate the provision of assistance in solving problems of environment and development;
- promote bilateral and regional cooperation;
- encourage economic and technical cooperation between countries of similar levels of development, especially in transfer of technology;
- increase UNEP's focus on regional priorities, and raise the degree of cooperation with UNDP; "this coordination can only be achieved through co-location of the two bodies on a regional basis and their restructuring as a single organization".

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UGANDA

Full Title: National Report on the Environment and Development
(Prepared for the UN Conference in Brazil, June 1992)

Date of Report: July 1991

Version: Final

Original Language: English

Other Language(s): -

Total Pages: 86

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1. DRAFTING PROCESS

National Committee: Editors & Authors:

The report was prepared by the National Resistance Movement (NRM) Government through a multi-sectoral National Committee (NATCOM) composed of technical experts from line Government departments, Academic Institutions, the private sector and NGOs. It was approved by the Cabinet and signed by Hon. Henry Kajura, Minister of Energy, Minerals & Environment Protection.

Other Ministries and Government Agencies:

See above

NGOs, Grassroots Organizations and Public Involvement:

NGO participation mentioned, but no details given. "In line with Government policy of grassroots participation, the draft technical reports were discussed at district levels to solicit people's views, comments and recommendations" (page v, Foreword).

2. PROBLEM AREAS

- High and increasing population growth rate (2.5 % per annum) and a high proportion (about 54 %) of dependent population.
- Economy: inflation (fought at expense of high interest rates, high unemployment, very low wages, etc.) unfavourable balance of payments, unstable or over-valued currency that has to be redressed by frequent devaluations. It is estimated that the country's debt servicing ratio was 62 % of its export earnings in 1989 (p 49).

- Dependency on a single economic base, i.e., agriculture (over 80% of the country's economic base upon which 93% of the population depend for their livelihood and the country depends for its export earnings). Coffee is the most significant export crop from which the country derives 90% of its export earnings.
- Biotechnology: earlier activities included plant breeding and seed multiplication. These activities suffered setbacks due to inadequate funding, lack of sufficient scientific knowledge of up-to-date biochemical processes and lack of adequately trained personnel.
- Because of fragmented legal provision, little awareness and inadequate enforcement, unacceptable chemicals have been imported into the country and distributed to farmers, for example:
 - crude dieldrin used in control of banana weevils in 1987/1988 resulted in the widespread loss of the crop in the country, piling up of unbought stocks and pollution of the environment;
 - toxaphene released into natural drainage water systems from cattle dips after which traces are found in milk and cattle fat;
 - 350,000 litres of organochlorine-thiodan used in control of tsetse flies (p 7).
- Mining sector risks, e.g. small scale prospectors use mercury metal in the extraction of gold. The mercury waste is dumped into rivers.
- Water: contamination of rivers and lakes from brewing, leather-tanning, sugar and textile industries.
- Settlements: inadequacies of infrastructural services (because of dispersion of homesteads) and housing; lack of good and safe water supply, sanitation and sewage disposal; encroachment on reserved land for game reserves, forests etc. (p 14). On the other hand, use of natural resources in building (stones, soil, sand, clay, timber and water) has led to landslides, landscape destruction, soil erosion and deforestation (p 38).
- Health: shortage of doctors and paramedical skills, supply and distribution of drugs, lack of equipment for both curative and preventive medical services, rapid urbanization and high rate of population growth, lack of concerted development planning and implementation of proposed plans, poverty (p 46).
- Deforestation for energy
- Illiteracy

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

- Ministry of Environment Protection (established in 1986), "has been able to formulate and launch a number of programmes, to mobilise local as well as external cooperation towards these programmes and to coordinate, monitor and evaluate environmental activities throughout the country" (p 2).

- Uganda has initiated actions to formulate comprehensive and consolidated environmental law and standards. There are many institutionalized legislation, regulations and standards which, when properly enforced, could promote commensurate environmental goals (e.g. the Industrial Licensing Act, Animals Act - Prevention of Cruelty, the Drainage and Sanitation Rules, etc.) (p 58).
- Forest management - areas being addressed include:
 - maintenance of forest reserve areas;
 - regulation of timber cutting, charcoal production and other forms of forest exploitation;
 - collection of royalties and fees from timber extraction;
 - silvicultural work for generation of forests;
 - softwood plantation expansion etc. (p 8).
- "Uganda has not yet reached a crisis situation concerning industrial pollution. As a preventive measure, attention is being placed on scrutinizing industrial licensing, imports and quality of industrial products. Additional measures include training of industrialists and those who enforce the regulations" (p 14).
- Fossil fuel exploration is under way to establish the petroleum potential in the country; solar and geothermal energy have prospects (p 23).
- The government is due to launch the National Tree Planting Agenda (p 24).
- A national study on rural electrification has been conducted with the objective of providing electricity throughout the country in the next 20 years. Twenty-five schemes were identified, three of which secured funding from the EEC (p 24).
- The Government, in collaboration with the African Regional Centre on solar energy in Bujumbura, Burundi is now engaged in experimenting biogas digesters/electrogenerators. A number of privately owned biogas plants exist already. A government-financed pilot project at Makerere University is about to be commissioned to boost the present stock and quality of digesters (p 25).
- Industries being encouraged to switch from the use of oil-fired boilers to electric boilers to save foreign exchange and curtail loading the atmosphere with green-house gases.
- Fisheries: the Government intends to rehabilitate and promote this activity by extension services and assistance in the construction of fish ponds and the supply of young fish. Existing fish fry centres to be rehabilitated and private entrepreneurs will be encouraged to go into fish breeding (p 31).
- Housing: the formulation of the National Shelter Strategy focuses on an enabling approach and provision of sites and services for housing development (p 36).
- Health: accelerated immunisation of children; health education (network of health educators, school health programmes introduced in primary schools); information education on AIDS; AIDS counselling centres; family planning and nutrition campaigns (p 46).
- Education: Government, universities and NGOs are actively involved in formal and informal environment education (p 48).

- Economy: some of the modest achievements recorded so far relate to:
 - attaining and maintaining, at least for the last two years, an annual growth rate of 6.9%;
 - a steady reduction in the rate of inflation, up to 30% in June 1990;
 - increase in diversification of exports assisted by barter trade and liberalisation policies;
 - decline in consumer prices indices (p 50).

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

Nations and particularly developing nations should:

- appraise their natural resources and set specific goals for their conservation and sustainable utilization;
- upgrade forest management programmes; recognize need for food security and allocate adequate financial resources for the purpose;
- recognize role of education, research and training to promote human resource development and environmental awareness;
- address the issues of debt burden and unfair terms of trade;
- recognize the role of women, youth and peasants in promoting sustainable development;
- recognize the need for decent shelter as a measure for ensuring sustainable living and working environment for the poor in both urban and rural areas;
- Encourage and enhance regional and subregional cooperation.

The international community should resolve the problems of unfair terms of trade and debt burden in order to ensure optimum and sustainable use of resources and alleviation of poverty.

A special fund should be established to compensate countries which are net absorbers of greenhouse gases.

A fund should be set up for:

- promoting transfer of appropriate technologies;
- supporting infrastructural development on favourable terms;
- supporting the development of safer and affordable alternative sources of energy in developing countries.

Efforts to conserve bio-diversity in developing countries should be recognized and supported by the international community.

Developing countries should be assisted to participate effectively in environment issues international fora (pp 59-63).

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

- Industry: the Government has opted for a more outward looking policy which promotes foreign investments, privatization and small scale industries (p 13).
- Installed capacity of hydro-electric power at the Owen Falls plant is 150 MW. It is being increased by 30 MW under a project financed by the UK, the World Bank and the Commonwealth Development Corporation. A further hydro-electric scheme is being studied at Ayago Falls. A scheme to extend the power grid to Tanzania (Kenya already imports electricity from Uganda), with financing from the Italian government is going ahead (p 24).
- Funding needed for 22 electrification schemes (see capacity building initiatives) (p 24).
- Funding needed for agricultural research.
- Fisheries: the EEC financed the programme to supply inputs of nets, hooks, lines and outboard engines between 1985 and 1989 (p 31).
- Rural water supply and sanitation programmes: the Government has sought assistance from donors to equip and rehabilitate health services and water supply in rural areas. Amongst these are UNICEF, DANIDA, CARE, WATERAID etc.
- Communications: the telephone exchange services are being rehabilitated to enhance subscriber dialling facilities with financial assistance from German Commodity Aid (p 45).
- Various on-going projects (Annex VII) are being funded by Italy, Germany, France, DANIDA, FFW, the World Bank and the Uganda Government.

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

Uganda is to export hydro-electric power to Tanzania (see financial arrangements and funding requirements).

7. INTERNATIONAL COOPERATION

- Member of all UN and OAU related regional and sub-regional environmental and developmental organizations.
- Participated in UNEP's Governing Council Session of a Special Character in 1982 which marked the 10th anniversary of the establishment of UNEP.
- Participated in the African Ministerial Conference on Environment, held in Cairo 16-18 December 1985 and which resulted in the Cairo Action Plan.

- At regional level, Uganda hosted the first African Regional Conference on Environment and Sustainable Development in June 1989 which resulted in the Kampala Declaration on Sustainable Development in Africa.
- At sub-regional level, continues to cooperate with specific environmental agencies such as IGADD and UNSO.
- Uganda is a member of the Kagera Basin Organization; the Preferential Trade Area (PTA) and the Nile Basin Agreements and Protocols (p 53).

8. EXPECTATIONS FROM UNCED

See recommendations

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UKRAINE

Full Title: National Report of the Ukrainian SSR for the United Nations Conference on Environment and Development, 1992

Date of Report: July 1991

Version: Final

Original Language: Russian

Other Language(s): English

Total Pages: 38 (E)

National Contact Address: Ministry for Protecting the Environment, Kiev

UNDP Contact Address: N/A

1. DRAFTING PROCESS

National Committee: Editors & Authors:

No mention

Other Ministries and Government Agencies:

No mention

NGOs, Grassroots Organizations and Public Involvement:

No mention

2. PROBLEM AREAS

Water (page 2)

- Discharge of 19 billion cubic metres per year of waste water including dumping of contaminated industrial and municipal discharges (3.2 billion cubic metres a year). Almost one sixth are dumped into surface reservoirs without any purification. Coal and ore mining produces highly mineralized water.
- Owing to filtration and leakages, some subterranean sources of drinking water have been put out of operation.
- Protection of small rivers is an acute problem. Their banks are not forested and are thus open to the lapping of water; as a result, they lose water content and are exposed to silting.

Soil (page 5)

- One third of all arable land is affected by erosion. The loss is estimated at 3 billion roubles (US\$1.7 billion at October 1991 exchange rate) per annum.
- Humus content in soil is dropping.
- Contamination with industrial and chemical substances.
- Degradation due to acidification and salination.

Air (page 8)

- The metallurgical sector and the energy sector are the main pollutants, discharging annually anhydride sulphide (3072.7 thousand tons), nitrogen oxide (766.5 thousand tons) and carbon monoxide (469.2 thousand tons).
- Discharges from the transport sector (motor vehicles) make up 37% of the total discharges of pollutants in Ukraine.

Chernobyl (page 14)

- Population exposed to radiation above permissible limit. Special attention should be paid to the following categories of the population:
 - persons who received radiation of the thyroid gland: 150,000 people including 60,000 children;
 - persons directly participating in the cleaning up of the accident: about 110,000 people;
 - population living in the surrounding area: about one million people were affected through contaminated soil/foodstuff/milk.
- Soil contamination: the total area of contaminated farmlands amounted to 3.5 million hectares, of which 3.1 was plowed
- 1.5 million hectares of forest in the Ukrainian Polissya were contaminated. Total damages exceed 100 million roubles (about US\$ 57 million). Several lumber enterprises closed down. The annual volume of procurement of wild fruit and berries dropped by 600 tons, mushrooms by 580 tons, medicinal herbs by 80 tons and hay by 3,500 tons.

Regional (page 17)

- The Black Sea:

Some 1.8 billion cubic metres of contaminated water are dumped annually into the sea, together with more than 3 million tons of heavy metal salts, 200,000 tons of organic compounds and 3,000 tons of oil products. There has also been an increase in the level of the hydrogen sulphide layer, especially in the last 25-30 years.
- Sea of Azov:

More than 4.6 billion cubic metres of waste water, of which about 1.1 billion are contaminated, are annually dumped into the sea from Ukraine alone. Main contaminants are from metallurgical, chemical and petrochemical industries. "The irretrievable great volumes of fresh water used for irrigation especially from the Don and Kuban rivers" have upset the salt-water balance of the sea. The annual fish catch dropped from 164,000 tons in 1980-1987 to 49,800 tons in 1989. In the summer of 1990, there was mass death of fish, dolphins and other aquatic organisms. Frequent accidents of sewer networks lead to a high bacteriological contamination of the sea.
- The basin of the Siversky Donets river, the main source of water supply for Lugansk Region, is severely polluted by industrial discharges of phenols exceeding the permissible norms, by 7-10 times in some cases.
- The average index of ailments of the respiratory organs in children as well as of pathological changes in the blood of children and adults in the highly polluted areas are respectively 2.2 and 3 times higher than in the rest of the Republic.

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

- A State Committee of the Ukrainian SSR was set up in the Republic to improve nature conservation and to regulate the use of natural resources. Today it is known as the Ministry for Protecting the Environment.
- 1982, introduction of a fee for water used by enterprises from water resources and water management systems. This measure promoted the stabilization of water consumption and predetermined the trend for reducing water consumption in industry.
- 1991, introduction of a fee for discharging or dumping solid wastes/pollutants into the environment.
- A state service for observing and controlling environmental pollution has been set up in Ukraine. It will coordinate several hundred observation stations which will carry out operative monitoring etc.
- Protection against soil erosion: an area of more than 400,000 ha of protective forest belts has been planted and over 800,000 ha of ravines, gullies, sands, river banks and reservoirs have been fortified and afforested.
- Implementation of a soil-protecting farming system, with a contour-amelioration organization of territory, covering an area of 19.9 million ha, calculated to the year 2005.
- Re-cultivation of disturbed and exhausted lands and restoration of lands under pit refuse heaps, slime deposits, ash dumps and debris tailing heaps. Since 1972, some 300,000 ha of disturbed land have been re-cultivated, 76% of it was put at the disposal of farms, 58% of which was planted with crops.
- The use of mineral fertilizers in agriculture has increased by 2.5 times since 1972. As a result, use of pesticides has dropped by 30% since 1986.
- Work is under way to limit and prevent the discharge of pollutants into the atmosphere.
- On the whole, during the period 1980-1989, the discharge of sulphuric compounds was reduced by 776,500 tons or 20% and during the period 1987-1989, the discharge of nitrogen compounds was reduced by 29,700 tons or 2.7%.
- The Long Term Protection Program envisages introducing measures which would ensure the necessary decrease of sulphur compounds and nitrogen oxide discharges, as well as other pollutants.
- 1979, adoption of the Forest Code by the Supreme Soviet of the Ukrainian SSR. Logging has been prohibited on 30% of the forest area and strict controls have been established on the wood to be felled. As a result, the wooded territory of the Republic increased by 1.4% and made up 14.3% of the area during the period under review.
- It is planned to increase the area of green zones from 1.7 million ha to 2 million ha by the year 2000. There are 16 botanical gardens and 19 dendrological parks in Ukraine.
- The State protects some 500,000 ha of marshes.
- A network of radiological laboratories and posts, organized in the first days of the Chernobyl Nuclear Power Station accident, is being constantly modernized and specialists' qualifications raised.

- Legislation: a set of laws on environmental protection, land and land utilization was adopted in 1991 by the Ukrainian SSR. A new Criminal Code of the Ukrainian SSR is being drafted. Under this Code, it is envisaged to establish criminal liability for violating legislation on land and legislation on mineral wealth.
- Environmental education in schools from an early age.
- A scientific conference was held in 1991 to work out concrete forms and methods of increasing public participation in solving environmental problems.
- Presently, a transition to the propane-isobutane mixture as a propellant is being carried out at firms of the Ministry of Chemical Industry. Also, freons in refrigerating units and conditioners are being replaced by less ozone-destructive freons.

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

Proposals made in the 13th Five Year Plan:

- Lowering, by the year 2000, the level of air pollution by industrial centres, and by 1995, in cities and other populated areas with a much higher level of air basin pollution.
- Put a complete stop to contaminated waste water dumping by the year 2000, with the exception of mine and open pit water.
- Fundamentally improve land use, raise soil fertility and lower soil erosion to the permissible level by the year 2005.
- Ensure the extensive reproduction of forests.
- Broad introduction of environmentally friendly technologies.

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

- In the 12th Five Year Plan, more than 2.4 million roubles (US\$1.4 million) were allotted to nature conservation. This made it possible to install waste water purification equipment, recirculate water systems and install dust and gas collectors.
- 3 billion roubles (US\$1.7 billion) are required to clear 30,000 km of rivers of silting.
- Over 5 million roubles (about US\$2.9 million) are spent in the Republic annually for the conservation and breeding of wild animals. There are six State zoological parks in Ukraine, with more than 100 species of animals.
- Nature conservation funds have been opened and are to be financed by fines paid by those who violate nature conservation legislation.
- The 13th Five Year Plan is to be financed by centralized capital investment, private funds from business firms and by nature conservation funds.

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

- One of the proposals of the 13th Five Year Plan is the broad introduction of environmentally friendly technologies.
- It is also said in the report that the further reduction of the consumption of ozone-destructive substances will be reached by the introduction of ozone-safe technology, improving the conditions for the storage and utilization of freons.

7. INTERNATIONAL COOPERATION

- As a member of the United Nations, Ukraine is party to 18 international agreements on environmental protection.
- Scientists of the Republic actively participate in international research programs such as UNESCO's "Man and the Biosphere." They also play an active role in international scientific seminars and conferences.
- Ukraine was elected three times in a row from 1981 to the Board of Managers of UNEP; it was also awarded the honorary badge "Global 500" for its most active environmental protectors and organizations.
- Ukraine's participation in UNEP began in 1975 when it made its first voluntary contribution to the environment fund. Its annual contribution to the fund amounts to 32,000 roubles (about US\$18,286), including 25% in convertible currency.
- Ukraine's representatives have actively participated in drawing up and supporting UNEP's decisions and resolutions, e.g. "Environment and the Arms Race, "Armaments and the Environment", preparation and distribution of UNEP publications and simultaneous distribution of documents in different languages of the UN.
- Every year, representatives of the Republic take part in the session of Senior Advisers to ECE governments on environmental and water problems.
- In 1990, talks began with experts in Czechoslovakia and Poland on the proposal of the three republics to set up a joint Carpathian biospheric preserve at the junction of their state borders.
- In December 1990 in Warsaw, a conference of representatives of environmental protection bodies of Ukraine and Poland took place to work out a plan for setting up nature reserves in the frontier regions.
- Bilateral cooperation with the Free State of Bavaria has begun in the field of environmental protection. In 1990, an exchange of delegations took place between the two states.
- Long-range transboundary air pollution: a protocol on reducing the discharge of nitrogen oxide was signed in Sophia in 1988. It envisages to freeze/stabilize by 1994, the discharge of nitrogen oxide to the 1987 level, and then undertake measures to lower this level.

8. EXPECTATIONS FROM UNCED

No mention

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UNITED KINGDOM

Full Title: This Common Inheritance, Britain's Environmental Strategy

Date of Report: September 1990

Version: Final

Original Language: English

Other Language(s): The 36 page summary is also available in French, German, Spanish and Welsh

Total Pages: 291

National Contact Address: Department of the Environment, 2 Marsham Street
London, SW1P 3EB, United Kingdom

UNDP Contact Address: N/A

1. DRAFTING PROCESS

National Committee: Editors & Authors:

The report was not specially produced for UNCED but is Britain's environmental strategy, presented to Parliament as a White Paper.

Other Ministries and Government Agencies:

Presented by the Secretaries of State for:

Environment, Trade and Industry, Health, Education and Science, Scotland, Transport, Energy and Northern Ireland, the Minister of Agriculture, Fisheries and Food and the Secretaries of State for Employment and for Wales.

NGOs, Grassroots Organizations and Public Involvement:

Many organizations submitted papers or talked to Ministers and officials during the preparation of the White Paper.

2. PROBLEM AREAS

The report combines issues and government responses, main areas of concern include:

Global:

- Population growth, global warming, tropical forests, biological diversity, polar regions, the ozone layer.

United Kingdom:

- Global warming, transboundary air pollution including acid rain & ozone depletion, noise, water resources, including farm run off, hazardous substances and waste.

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

The Government's approach to improving the British environment is based on the following objectives:

- protecting the physical environment through the planning system and other controls and incentives;
- using resources prudently, including increasing energy efficiency, recycling and the reduction of waste;
- controlling pollution through effective inspectorates and clear standards;
- encouraging greater public involvement and making information available.

The Environmental Protection Bill is the UK's Government's central response. The Bill radically overhauls British pollution control systems:

- introduces Integrated Pollution Control;
- tightens controls and introduces stiffer penalties;
- strengthens the power of Her Majesty's Inspectorate of Pollution;
- ensures a systematic public right of access to environmental information.

Areas covered by the Bill are wide ranging including many of the sections outlined below.

The Water Act (1989) created the National Rivers Authority to enforce tough environmental standards.

Global Warming

The UK will set itself the target of returning carbon dioxide emissions to 1990 levels by 2005 if other countries take similar action. In addition the Government will take action on:

- Energy: including the development of the Energy Efficiency Office and a new Ministerial Committee on energy efficiency;
- Transport: including considering further changes in taxation on fuel and vehicles; improve fuel consumption; encourage transport choice (train, bus and light rail);
- Forests: tree planting and community forest schemes including more broadleaved species;
- Methane emissions: improvement to 1000 landfill sites, collecting methane where possible; and continue to restrict consent on the venting of methane on oil/gas fields.

Land use Planning: the Government makes 21 proposed measures related to:

- ensuring that the planning system reflects environmental priorities;
- development control, including the speeding up of decision taking;
- extensions of planning control, including additional measures over farm buildings and tree/hedgerow preservation;
- regional guidance and the preparation and streamlining of development plans;
- ensuring that vacant, derelict and contaminated land is brought quickly into better use.

Countryside and Wildlife: The Government lists 31 measures intended to:

- integrate environmental considerations with the economic activity in the countryside;
- build environmental protection into agricultural policies;
- encourage landscape conservation and opportunities for recreation;
- conserve wildlife diversity.

Towns and cities: 15 measures are listed to:

- ensure that planning decisions respect the environment of towns and cities;
- civilise traffic in towns;
- make specific improvements in the urban environment.

The Heritage: 12 measures to:

- ensure the continued preservation & enjoyment of heritage, including historic buildings and landscape.

Britain's approach to pollution control: 7 general measures:

- The approach is translated into legislation through the Environmental Protection Bill.
- A major component of the Bill is the enforcement role of Her Majesty's Inspection of Pollution and the concept of Integrated Pollution Control.

Air: 20 measures to:

- improve controls over emissions to air outdoors;
- reduce the levels of emissions from specific sources;
- reduce risk from indoor air pollutants.

Water: 19 measures to:

- protect and improve the quality of drinking water, rivers and surrounding seas;
- protect and improve the quality of marine waters.

Hazardous Substances and Genetically Modified Organisms: 24 measures to:

- control the use of chemicals which carry risks to human health or the environment because of widespread use, persistence in the environment and toxicity;
- evaluate the potential environmental effects of the large number of industrial chemicals;
- control the use of pesticides;
- reduce the risks of major accidents during manufacture, processing or storage of hazardous chemicals;
- ensure the safe use of genetically modified organisms.

Waste and recycling: 25 measures to:

- minimise the production of waste;
- encourage recycling;
- introduce tougher requirements for waste disposal;
- combat litter.

Nuclear power and Radioactive Waste: 10 measures to:

- ensure high safety standards;
- take several initiatives in advance of the 1994 full scale review of nuclear policy.

Noise: 15 measures to:

- reduce the extent of noise pollution at source;
- make controls over noise more effective.

Research, Monitoring and Awareness: 12 measures to:

- base policies on the best scientific economic and technological evidence, and building on the strengths in British research;
- increase awareness generally and among consumers.

Education and Training: 8 measures to:

- improve the contribution of the education system in order to extending environmental awareness;
- ensure that education and training organisations increase their response to environmental needs.

Government Institutions and Consultation: measures to:

- integrate environmental concerns into decision taking within government;
- strengthen the role of pollution inspectorates;
- improve the dialogue on environmental issues with those outside the government, and increase involvement of the environmental sector.

Scotland, Wales and Northern Ireland:

- Measures are outlined which deal with the special environmental considerations of Scotland, Wales and Northern Ireland.

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

The Government will encourage the European Community to:

Combat the greenhouse effect:

- label electrical appliances with energy efficiency information and set minimum efficiency standards;
- carry through R&D on renewable energy sources;
- amend or repeal anomalous regulations which hinder reduction in greenhouse gas emissions.

Improve pollution control:

- encourage an integrated system of pollution control based on the model provided in the Environmental Protection Bill;
- call for improved standards of air quality monitoring;

- press for higher standards of hazardous waste management;
- urge tougher controls on vehicle emissions
- press for community-wide arrangements for water quality;
- argue for the retention of strong controls after 1992, related to the transboundary movements of wastes.

Countryside:

- argue for environmental considerations to play a greater role in the Common Agriculture Policy.

Consumer awareness:

- press for the adoption of a European labelling scheme for environmentally friendly products;
- press for stronger monitoring of member states compliance with EC obligations.

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

The report lists numerous examples of financial support to environmental projects/research under the headings:

Population Growth (page 49), Energy Efficiency (page 50), Tropical Forests (page 51), Ozone Layer Research (page 56, 57), Research - Britain and the World Environment (page 62), Global Climate Change (page 78), Land Use (page 94), Countryside and Wildlife (112), Towns and Cities (page 124), Heritage (page 130), Britain's approach to Pollution Control (page 140), Air (page 160), Water (inland and marine) (page 174), Hazardous Substances and Genetically Modified Organisms (page 184), Waste (page 198), Nuclear (page 206), Noise (page 214), Public Sector Research (page 216), Wales (page 244), Scotland (page 258), Northern Ireland (page 266), and Economic Instruments (page 278).

Examples include:

Global/international

- £15.4 m, 1989/90 spent by Natural Environment Research Council (NERC) Ocean Research related to climate change and pollution.
- £0.4 m, 1989/90 to investigate cetaceans.
- 0.5 m, 1989/90, spent by NERC on satellite data to study global world problems, including desertification, deforestation and global climate change.
- £12.3 m, (1989/90), spent by Overseas Development administration to investigate how renewable natural resources can be used.
- £12 m, (1989/90), spent by Britain as part of the European Space Agency's Earth Resources Satellites Programmes (page 62).
- £6.0 m (1990/91), spent by the DOE on potential impacts of climate change and abatement strategies, involving the setting up of the Hadley Centre.

- £17.3 m (1989) related to population growth, channelled through UN Population Fund and the International Planned Parenthood Federation.
- £50 million grant to India to improve energy supply and use.

Other energy efficiency projects are in Bangladesh, Pakistan and Uganda.

Tropical Forests: In 1990 the UK was supporting 150 projects with a further 60 in preparation, total cost £160 million. Bilateral programmes include £40 m to India, £10 m to Indonesia and £4 m to Ghana.

UK based projects and research include:

- Pesticide research, £21.5 million to help reduce pesticide use.
- £7 million to investigate farm waste management.
- £3 million into studies aimed at setting national standards.
- £8.3 million for research into improved radioactive waste disposal.

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

Renewable Sources of Energy are to be researched, developed and promoted:

- The Water Act, 1989, encourages small scale hydro-schemes by exemption from water abstraction charges;
- Wind energy on land can supply up to 10% of energy needs (Government spending on wind energy was £4.8 million in 1989/90); extensive research will continue;
- Tidal power has the potential to produce the equivalent of 26 million tonnes of coal annually, therefore reducing sulphur dioxide and carbon dioxide emissions. Estuaries have been subject to preliminary feasibility studies with a view to barrage construction;
- Building design involving simple construction can cut down on energy consumption; increased awareness is important.
- The Government views three biofuels as important:
 - Gas (methane) from waste landfill, sewage sludge & anaerobic digestion of municipal waste;
 - Burning dry wastes: dry refuse, industrial waste, straw and forestry wastes;
 - Biofuel crop planting: The Government in 1990/91 provided £0.5 million to develop low cost woodfuel technologies.
- The government has increased support on "renewables" to £20 million. A key objective is to encourage industry to take up the technologies.
- Privatization of electricity will offer special opportunities to renewables. The Electricity Act provides for a Non-fossil Fuel Obligation and provides for compensation to suppliers from a levy on sales of fossil fuel generated electricity. An Order requires suppliers to contract in total 102 megawatts of renewable capacity by 1998.

Stress is placed on the role of the EC in promoting renewable energy.

7. INTERNATIONAL COOPERATION

In order to assist developing countries with environmental concerns the UK Government will address several key areas:

Global Warming:

- provide financial and technical help;
- develop new aid initiatives which encourage energy efficiency.

To encourage sustainable management of forests:

- help strengthen and reform the Tropical Forestry Action Plan;
- continue to help the Tropical Timber Organisation in ensuring that trade is carried out in a sustainable manner;
- provide bilateral aid to address the social/economic reasons for forest loss and promote agroforestry and the reforestation of degraded land;
- fund research projects aimed at improving forest productivity in developing countries.

Population Growth:

- channel substantial aid for family planning;
- provide bilateral funding to alleviate poverty;
- directly fund projects to improve the health & education of women and to reduce infant mortality.

Biological diversity:

- support efforts to agree a Convention for the conservation of biological diversity;
- continue bilateral aid to conservation projects;
- implement a five-point plan, including finance for major studies on the status of the world's biological diversity;
- continue to support anti-poaching projects and the management of wildlife reserves;
- continue to give strong support to the Convention on International Trade in Endangered species of Wild Fauna and Fauna.

World's Oceans (sustainable management thereof):

- continue to contribute to scientific understanding;
- help developing countries practise sustainable methods of catching fish;
- continue to oppose indiscriminate fishing such as drift netting;
- continue to oppose resumption of commercial whaling until stocks are safeguarded and urge the use of non-lethal research techniques;

- press the International Whaling Commission to agree to similar measures for smaller cetaceans such as dolphins.

Polar regions:

- continue support to the Antarctic Treaty System;
- call for a comprehensive Environmental Management Plan for the Antarctic;
- continue to support the Convention on the Regulation of Antarctic Mineral Resource Activities;
- provide support for the British Antarctic Survey and press for the creation of an international Arctic Science Committee.

Ozone depletion/Chlorofluorocarbon (CFC) reduction:

- continue to the contribution of scientific study;
- continue to take a leading part in the elimination of ozone-depleting substances;
- phase out CFC production and consumption by 2000;
- press the European Commission to phase out CFCs by 1997;
- contribute up to 9.4 million pounds, over three years, towards the costs of developing country compliance with the revised protocol;
- provide bilateral assistance to India for its plans on phasing out CFCs.

The report notes that Britain has played a leading role in achieving international agreement protecting the ozone layer.

Environmental Resource Management:

- strengthen environmental institutions in developing countries;
- encourage business to take environmental considerations into account and to provide expertise;
- ensure international conventions respect the international environment;
- continue to support voluntary organisations working in developing countries;
- continue to support environmental work of international bodies, including that of EC, UNEP, the World Bank and OECD;
- work to ensure the successful conclusion of UNCED.

Britain attaches particular importance to the environmental policy of the European Community, pointing to some 280 environmental measures.

To help improve environmental standards in Eastern Europe, the UK will contribute to work on international bodies and will support Community action.

8. EXPECTATIONS FROM UNCED

The UK looks for UNCED to set a long-term agenda, including deciding how the UN should become more environmentally responsive.

The government expects recommendations emerge on strengthening UNEP as an integral component of a more effective UN approach.

UNCED should also provide firm guidance on:

- streamlining international cooperation;
- broader adherence to international environmental law;
- cooperation between the industrialised world and poorer countries.

"Britain is determined to play a leading role in helping the 1992 Conference to a successful conclusion."

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UNITED REPUBLIC OF TANZANIA

<i>Full Title:</i>	National Report
<i>Date of Report:</i>	July 1991
<i>Version:</i>	Final
<i>Original Language:</i>	English
<i>Other Language(s):</i>	-
<i>Total Pages:</i>	109
<i>National Contact Address:</i>	Ministry of Tourism, Natural Resources and Environment, P.O. Box 9372, Dar-es-Salaam United Republic of Tanzania Tel.: (255-51) 346 03
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1. DRAFTING PROCESS

National Committee: Editors & Authors:

The Report was approved and signed by the Minister of Tourism, Natural Resources and Environment on behalf of the Government of the United Republic of Tanzania.

Other Ministries and Government Agencies:

The National Committee included representatives from the following Government Ministries and Departments:

- Tourism, Natural Resources & Environment
- Agriculture, Livestock Development & Marketing
- Land, Housing & Urban Development
- Finance
- Planning
- Fisheries
- Wildlife
- Forestry & Beekeeping and Industries & Trade
- The Tanzania Chamber of Commerce

NGOs, Grassroots Organizations and Public Involvement:

The following NGOs took part in the preparation of the report:

- Tanzania Non-governmental Organizations (TANGO)
- Women's groups through "Umoja wa Wanawake Tanzania" (UWT)

2. PROBLEM AREAS

- Population growth rate is high, and pressures on resources are likely to increase;
- Urban areas, especially in Dar-es-Salaam and Zanzibar Town, have pollution problems and associated health issues. Only 7 towns have any sewage system at all, and existing facilities are inadequate. Tourism development in coastal areas could exacerbate problems of aquatic pollution, as untreated sewage is emptied into the ocean;
- Adverse global environmental changes would be of grave concern, as agricultural production is only a small margin above subsistence;
- Environmental database and monitoring systems are inadequate, resulting in poor quantification of problems;
- Desertification and degradation issues exist, such as deforestation, soil erosion and depletion of soil fertility. The prime cause of desertification is expanding agriculture rather than overgrazing by pastoralists. Coastal rag areas are under pressure from population and the related intensive cultivation and from the gathering of fuelwood. Deforestation is estimated at between 300,000 - 400,000 hectares per annum, which, if undiminished would deplete the country's resource base in little over 100 years;
- Destructive fishing methods, such as dynamiting, deplete populations and destroy corals and coral-based marine life;
- Coastal erosion is a problem both in parts of the mainland and on Zanzibar, and will be aggravated by any rise in global sea levels;
- Treatment of industrial effluent is inadequate, especially in the mining industry.

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

- The National Environment Management Council was set up in 1983 and became operational in 1986;
- The National Land Use Planning Commission was established in 1984 and became operational in 1987;
- In Zanzibar, the Commission for Lands & Environment was established in 1989;
- The Ministry of Tourism, Natural Resources and Environment was established in 1991, although the division for the environment is still embryonic;
- The Agricultural Policy and the Livestock Policy were published in 1983, setting out guidelines for sustainable development and use of the resources in question;
- The first Forestry Policy was issued in 1957, and was revised in 1986; the Village Afforestation Programme encourages the tree-planting effort at the individual, village and school level; the Commission for Natural Resources (Forestry) is developing a new policy to encourage the planting of seeds and operation of nurseries; other programmes include improvement in efficiency in the use of wood fuels, such as better charcoal stoves and tobacco curing barns;

- Emphasis is placed on wildlife conservation and management of wildlife resources by broadening the participation of local people (e.g. the Selous Village-Based Conservation Programme); tourism is seen as a vehicle for conservation as well as a means of providing a more tangible economic value to the conservation of flora and fauna;
- Protective measures and projects to preserve biological diversity include: "Moto na Mazingira (Fire and Environment)", to increase awareness of the devastating effects of bush fires; Operation "Uhai (Life)", a programme initiated in 1989 to fight poaching; the Serengeti Regional Conservation Strategy; the Gombe Chimpanzee Conservation Project in Kigoma Region;
- Efforts have been centred on the enforcement of the 1970 Fisheries Act; a National Contingency Plan in case of massive marine pollution is under discussion; the Zanzibar Fisheries act was revised in 1989 to provide for environmental and sustainability considerations;
- The following programmes, either under way or in the pipeline, are aimed at protecting or conserving resources in the development process: Integrated Soil & Water Conservation Projects; Tanzania Forest Action Plan; Livestock Programme Year 2000; Land Use Physical Plans Programme; National Conservation Strategy; Plan of Action to Combat Desertification;
- On Zanzibar, several programmes are being designed by the Department of the Environment, including: Integrated Coastal Zone Management; Environmental Education; Research & Monitoring on the State of the Environment; Nature Conservation; Pollution Control.

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

The report identifies the following needs:

- establishment of a basic data and monitoring system, to enable the scope and severity of environmental problems to be assessed accurately, and to evaluate costs of proposed solutions;
- increase people's participation in programmes directed at solving environmental problems;
- promotion of environmental education, awareness and knowledge, targeting all groups, whether they be policy makers, villagers, townspeople, school children or even tourists;
- incorporation of environmental considerations into economic planning and project preparation, using Environmental Impact Assessment and Natural Resource Accounting;
- improvement of policy framework, to ensure coordination and agreement in addressing priority issues, to emphasize population policy, to strengthen the legal framework and to ensure enforcement.

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

Bilateral and multilateral aid is required to supplement national efforts in combatting environmental problems.

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

Use of non-conventional renewable energy sources such as wind and solar energy, biogas and natural gas are yet to be exploited, although gas has been discovered at Songo Songo and Mnazi Bay.

7. INTERNATIONAL COOPERATION

At the regional level, Tanzania is a member of the Southern Africa Development Coordination Conference (SADCC), founded in 1980, as well as the Eastern and Southern Africa Preferential Trade Area (ESAPTA).

In the international context, Tanzania supports the on-going preparatory measures and negotiations within the UN system.

8. EXPECTATIONS FROM UNCED

- Strengthening of existing multilateral and development organizations; further, linkages between UN specialized agencies dealing with environment and development issues should be reinforced;
- "Tanzania is particularly interested to see the conclusion of international conventions and protocols related to the following: the Earth Charter; climate change; biological diversity; hazardous wastes and toxic substances; environmentally sound technology; funding mechanisms";
- The assistance of the international community is needed to help overcome manpower, financial and technical constraints;
- The sharing of the benefits from advances in science and technology;
- "A reformed international monetary system is required and this should go to the extent of restructuring the International Monetary Fund to be a genuine world bank"; goals include the provision and management of an international reserve asset; stabilizing of exchange rates and international interest rates and the provision of international liquidity on terms that take account of the special needs of developing countries.

9. REPORT'S CONTENTS

Foreword

Executive Summary

1. Tanzania's Natural Resources Endowment
2. Development Trends and Resource Use
3. Environmental and Development Issues
4. Responses and Institutional Framework
5. Women, Environment and Sustainable Development
6. Role of NGOs in Environmental and Development Programmes
7. Future Needs and Required Actions
8. Tanzania's Expectations of UNCED

Bibliography

VANUATU

Full Title: Vanuatu National Report for UNCED
Date of Report: July 1991
Version: Final
Original Language: English
Other Language(s): -
Total Pages: 70
National Contact Address: Environmental Section
 Department of Physical Planning and Environment
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1. DRAFTING PROCESS

National Committee: Editors & Authors:

The report was drafted by a consultant provided by the South Pacific Regional Environment Programme (SPREP) and was assisted by the Principal Environment Officer of the Ministry of Home Affairs.

The report was reviewed and amended by the Vanuatu UNCED Task Force and, subsequently, submitted for endorsement to the Vanuatu National Development Committee. Vanuatu, in common with other Pacific Island Developing Countries (PIDCs), has received help through SPREP, the Asian Development Bank, and the United Nations Development Programme (UNDP).

Also consulted:

- The Commonwealth Scientific and Industrial Research Programme (CSIRO)
- SPREP
- Office de la Recherche Scientifique et Technique d'Outre-Mer (ORSTOM)

Other Ministries and Government Agencies:

The task force included widespread Government representation:

- Environment Section, Ministry of Home Affairs
- Department of Agriculture, Livestock and Horticulture
- Fisheries Department
- Department of Forestry
- Department of Geology, Mines and Rural Water Supply

- Department of Health
- Department of Physical Planning and the Environment
- National Planning and Statistics Office
- Attorney General's Office

The Department of Industry was also consulted.

NGOs, Grassroots Organizations and Public Involvement:

Task Force NGO representation consisted of:

- the Vanuatu National Council of Women
- the Editor of *Naika* — the Journal of the Vanuatu Natural Science Society

2. PROBLEM AREAS

"[Vanuatu] may be in the fortunate position of having the opportunity of taking preventative action rather than remedial action in ensuring that the development process does not cause serious deterioration to the environment."

Highlighted constraints to sustainable development:

- Lack of information on biological resources: The inadequacy of biological data makes resource planning difficult;
- Shortages of staff and recurrent funding: Sectoral departments dealing with natural resources, "without exception", are reported to regard under-staffing as a constraint to adequate monitoring and effective control over resource use;
- Short term aid projects: Concern is expressed that "aid is short term but sustainability is long-term";
- Low commodity prices: Low or fluctuating prices are seen as a inhibition to sustainable development. Low copra prices increasingly force remote villagers to exploit other resources such as trochus shell and coconut crabs. Increased land clearance is seen to result from economic diversification;
- Long term leases of customary land: The 75 year leasing of land is seen to limit long term planning, necessary for the future needs of a rapidly growing population;
- Pressure on the subsistence resource base: The report questions trends away from subsistence towards commercial exploitation. On some islands combined population growth and commercial agriculture encourages use of marginal land, which may increase erosion, damage to water supplies and sedimentation of reefs;
- "Looseness" between environmental/physical planning and project development: "Missing laws and loose procedures" could lead to "environmental misfortune". The lack of firm physical-planning over control of shore-lines allows tourist development which is not subject to adequate assessment;

- Weakness in enforcement and monitoring: Weak monitoring relates to a lack of trained manpower and the precedence of economic considerations. Monitoring of biological change is weak (see Forestry below);
- Incomplete legislation: A thorough review has been carried out. Legislation is needed to cover pesticides and toxic chemicals, soil conservation, protected areas, coastal management, scenic areas, custom sites, and damage to subsistence resources.

Other identified problem areas include:

- Population pressure/increase: Population density is low (12 persons per square km) but rising. Careful planning is required;
- Water/water pollution: Village supplies are fairly pure; increasing growth of Port Vila and Luganville is, however, causing faecal contamination of ground water. Lagoon waters around Port Vila show increasing turbidity and a decline in water quality. Tourism and health could both be adversely affected, and shellfish supplies contaminated. The two urban areas use ground water but how infiltration rates match withdrawal is not known;
- Urbanization: Problems relate to water pollution, rubbish disposal, social breakdown, disease and crime;
- Land issues/tenure: Locally, in some areas/islands, land availability is becoming an increasing problem. Between 1979 and 1989 cultivable land per rural household declined from 26 to 22 hectares. The report, however, quotes the Second Development Plan: "disputes over the ownership of customary land, rather than land availability, are the largest single obstacle to the development of the rural areas of Vanuatu";
- Resource depletion: Monetization and increased population has led to the break down of traditional resource regulation:
 - Trochus shells: harvesting requires careful sustainable management but traditional laws are now ignored;
 - Coconut crabs: stocks are declining, partly as a result of collection for the restaurant trade;
 - Mangroves: threatened by tourist development and fuelwood gathering;
- Forestry: The resource is largely unknown in terms of size and characteristics - tree cover is at around 75%. After logging, invasion of exotic weeds, shifting agriculture and cash cropping make forest recovery slow or impossible. "Where logging does occur, conservation practices are poor, streams are not protected by buffer strips, and roading is not properly placed";
- Deteriorating garden fallow and soil exhaustion: There is a suggestion that, related to increased population, fallow periods are becoming shorter. Felling is carried out for land clearance;
- Protected areas: The current system covers an insignificant proportion of the total land area and fails to provide effective legislation. Land compensation payments, in respect of protective area establishment, are prohibitively expensive.

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

There are several aid-funded capacity building programmes (see section 5).

In 1986 the government took an important step in the formation of the Environmental Unit, now a section in the Department of Physical Planning and the Environment. The Section has undertaken or completed the following projects:

- preparation and introduction of Environmental Impact Statement Guidelines;
- freshwater resource surveys;
- crocodile survey;
- dugong survey;
- heritage site survey;
- identification and establishment of protected areas;
- development of environmental education;
- held a 1987 environmental conference bringing together Government and the private sector.

The Environment Section is currently undertaking investigations, preparatory towards the drafting of the National Conservation Strategy. In 1987 the National Advisory Committee on the Environment (NACE) was formed. This high level inter-departmental committee aimed to integrate environmental initiatives across sectoral lines and to review EIA. NACE is now charged with the task of coordinating the preparation and eventual implementation of the National Conservation Strategy.

Other initiatives include:

- Vanuatu National Forest Resource Survey and the Forest Resource Information System (FRIS): Once completed the location, biomass, structure and floristics of the timber resource will be better known, aiding planning and monitoring. The FRIS will also hold information about non-forest resources, so greatly enhancing agricultural land use planning;
- Mangroves: Some proposed mangrove removals have been prevented or decreased owing to Environmental Section initiatives;
- Manufacturing: The Government places high priority on manufacturing in order to widen the present narrow base of domestic production and to provide employment. Banning the export of unprocessed logs is intended to encourage the development of a local timber industry;
- Village Fisheries Development Programme: Since Independence, the programme has sought to increase catches by means of training, boat building and through the improvement of technology;
- Water: Successful progress has been made with the promotion of clean water access in rural areas; 75 % of villages are now supplied with piped water;
- Conservation covenants: The Department of Lands often includes such covenants in leases made under the Land Leases Act.

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

Objectives:

- increase study and knowledge of natural environment/wildlife;
- recommend procedures for the rational development of natural resources and wildlife;
- initiate relevant legislation;
- increase awareness of conservation/environmental issues in government and other agencies;
- train Vanuatu personnel to take over the Environmental Unit;
- provide technical expertise to government and other agencies.

Priority areas and remedies:

- Ocean/reefs damage: improve knowledge, introduce control measures and establish reserves;
- Soil erosion: implementation of control measures, modification of practices and intensification of land use are all required;
- Natural forest loss: control and modification of practices, intensification of land use, resource substitution, reserve creation, rehabilitation, resource replanting and restocking;
- Loss of biological diversity: increase knowledge, improve control measures, intensify land use and establish reserves;
- Garden fallow & soil exhaustion: control rate of resource use, modify practices and intensify land use;
- Weeds and pasture degradation: control rate of resource use, modify practices, and encourage intensification of land use;
- Trochus shell depletion: improve knowledge, control rate of resource use, establish reserves, rehabilitate and restock;
- Mangroves degradation: control resource use and establish reserves;
- Coconut crab depletion: improve resource knowledge, control exploitation, establish reserves, rehabilitate and restock;
- Water pollution: practices require modification.

In addition:

- A national population policy is necessary. Initial moves towards formulation have been undertaken with the establishment of the Advisory Committee on Population;
- People on "land short" islands will need to find alternative sources of income;
- In response to rapid urbanization and increasing population, the government is enquiring about future needs of urban housing, educational and health facilities, water supply and employment;

- Laws and regulations directed at various environmental issues are now being considered or drafted. (Attorney General's Office is drafting the Water Resources Act; Fisheries is involved with measures to control harvesting of coconut crabs; Forestry seeks tighter logging regulations; Agriculture Livestock and Horticulture has requested tighter laws to control pesticides use and the Environmental Section has developed guidelines for preparation of Environmental Impact Statements);
- The report also mentions the value of amending the Physical Planning Act to promote "enforcement".

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

No direct funding requests are made in the report. Currently, aid accounts for 25% of GDP and 75% of the trade balance. Several programmes involving aid are functioning:

- Vanuatu Pasture Improvement Project: funded by Australian aid, the project is mainly concerned with degraded pasture rehabilitation;
- Development of Sustainable Systems of Food Cropping for the Volcanic Islands of Melanesia: Primarily agroforestry based, the scheme aims at environmental and economic sustainability;
- Cocoa Plantation, Malakula/Coffee Plantation, Tanna: Established by the Commonwealth Development Corporation;
- Tanna coffee processing plant: European Community funded;
- Portable Sawmills ("walkabout sawmills"): the mills are promoted by the Foundation for the Peoples of the South Pacific, as a means to encourage "environmentally benign logging".

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

Small portable sawmills are seen as an effective means to utilise forest resources sustainably, providing raw resources for village development.

A small number of solar PV installations are in operation.

Geothermal generation of electricity is presently under evaluation. A hydro-plant (Japanese designed) has been established on the Sarakata River.

Wave energy is under investigation (Norwegian technology) and is regarded as having "great potential".

There is a need to implement effective urban sanitation technology at affordable cost.

7. INTERNATIONAL COOPERATION

Pacific Island Developing Countries (PIDCs) have held inter-governmental meetings on Environment and Development. (SPREP plays a central coordinating role).

Ongoing regional cooperation is illustrated by the common approach of PIDCs to the formulation of UNCED reports (SPREP guidelines adopted).

Vanuatu is involved in a regional programme to monitor sea-level changes.

8. EXPECTATIONS FROM UNCED

No specific mention

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WESTERN SAMOA

Full Title: National Report For United Nations Conference on Environment and Development, Western Samoa 1991.

Date of Report: August 1991

Version: Final

Original Language: English

Other Language(s): -

Total Pages: 64

National Contact Address: Division of Environment and Conservation
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1. DRAFTING PROCESS

National Committee: Editors & Authors:

The Report was coordinated through the Division of Environment and Conservation. A National task force team was set up to oversee report preparation, including endorsement. In addition, the task force to present a submission paper for Cabinet endorsement.

Financial assistance was provided by UNDP, through the South Pacific Regional Environment Programme (SPREP).

Other Ministries and Government Agencies:

The Task force consisted of:

- Lands and Environment;
- Foreign Affairs;
- Agriculture, Forests and Fisheries;
- Health;
- Public works.

NGOs, Grassroots Organizations and Public Involvement:

NGO task force representation:

- Chamber of Commerce;
- Manufacturers Association;
- O le Siosiomaga Society Inc.

2. PROBLEM AREAS

- Growing trade deficit, in agriculture and Industry, indicates investment has not been sufficient for sustainable growth;
- Continuing non sustainable resource use will eventually affect the income generating capacity of the country together with investment;
- Major development projects are proceeding without any EIA or consultation with the Division of Environment and Conservation;
- Funding and personnel are major constraints on the Division of Environment and Conservation;
- The customary land tenure system restricts the provision of funding assistance. Customary held land is not generally accepted as collateral for loans;
- Water supplies in many areas are insufficient to meet local domestic demand (5 out of 12 catchments have supply problems). In Apia water supplies are stressed by continuing migration;
- Soil degradation adversely affects forestry and agriculture;
- Energy supply shortfalls put pressure on forests and increase the demand for imported fuels;
- Fishery resources are threatened by over-fishing and loss of nursery areas (siltation from agriculture and forestry, destructive fishing techniques and eutrophication). For some coastal species a collapse has already occurred;
- Reef and lagoons are under threat from dynamiting, fish poisons, sedimentation, waste dumping in mangroves, industrial and domestic effluent and the crown of thorns starfish;
- Several species and ecosystems are mentioned as under threat (page xi & 11);
- The National Parks and Reserves system suffers from weak enforcement and small and declining funding. Few management plans exist;
- Land clearing is preceding at an uncontrolled rate. Clearance of indigenous forests is now estimated to have increased dramatically, currently at 4,000-8,000 ha per annum (p 28), most relates to agriculture;
- Increasing use of pesticides;
- Forest loss: The "alarming rate" of deforestation threatens biodiversity;
- Logging causes leaching and soil degradation. There are no forest rehabilitation plans;
- Population growth is low but is seen as increasing demands on resources and adding to waste disposal problems;
- Urbanisation: the unplanned growth of Apia has resulted in several environmental problems, principally waste disposal and ground water contamination;

- Coastal resources are under considerable pressure from high population density, 75 persons/sq km (p 8);
- Global Warming puts Samoa at increased risk from flooding inundation and natural hazards;
- Of additional concern: nuclear testing on Mururoa atoll and transboundary movement of hazardous waste;

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

The Lands and Environmental Act (1989): "umbrella legislation" encompassing natural resource protection, environmental management and pollution controls. Sectoral Acts include:

- The Water Resources Act (1985), provides for water shed protection, pollution control etc.;
- The Forestry Act (1967), allows for Sustained Yield Management;
- Fisheries Protection Act (1972);
- Fish Dynamiting Act (1972) forbids dynamiting, but the practice continues;
- National Parks and Reserves Act (1974) allows for gazetting of National Parks/Reserves and Sustained Yield Management of forests;
- Establishment of the Division of Environment and Conservation (1990) under the Department of Lands and the Environment. The long term goal is to establish a Department of Environment and Conservation;
- Water Committee (1989) to ensure watershed management;
- Pesticide Use Committee;
- Environmental education programmes are being instituted;
- Conservation areas an increase in numbers has taken place;
- Natural resource stock takes have been carried out;
- National Environmental Management Strategy: development will soon commence;
- Geographical System data base: development will continue;
- Watershed management section is examining ways to rehabilitate cleared land. The Vaisigano Pilot Watershed Management Project (UNDP/FAO funded) includes a community agriculture/forestry programme and water monitoring;

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

- Review economic policies and development planning - focusing on sustainable use, project selection and incorporation of environmental/economic impact of policies;

- Carry out a water resource survey;
- Undertake an assessment of unregulated land clearing;
- Carry out a land use/land potential audit;
- Improve extension services for sustainable agriculture;
- Undertake fish stock assessment, inshore and pelagic, and develop a management strategy;
- A national resource audit is required;
- Forestry: assessment of sawlog supply and demand, plantation establishment, benefit-cost analysis of forest utilisation;
- Energy sector: review pricing/production policies and formulate long term strategies;
- Determine viability of alternative energy technologies and remove import duties on such technologies;
- Formulate criteria relating to national park establishment;
- Modification of legislation so effective urban and regional planning can proceed;
- Extent and impact of domestic/industrial waste needs determining. Incentives and regulations are required to promote recycling;
- Environmental Impact Assessment: make it a requirement that all development projects contain an environmental statement and carry out EIA if required;
- Climate change: Prepare the economy for the possible adverse effects of global warming;
- Customary land (85% of total): procedures are required to facilitate its use for development, including its acceptability as security for development loan funding;

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

- UNDP has funded an assessment of inshore fishery resources;
- Aid projects have left the government with the difficulty of meeting recurrent expenditure;
- Total foreign debt stood at WS\$162 million (1989), showing a threefold increase between 1982-89;
- The Asian Development Bank accounts for 50% of foreign debt;
- Development assistance is important in the economy. External grants (1990) totalled WS\$39m and concessional loans WS\$139m. [US\$1 = WS\$2.36 (Jan 92)];
- Aid up to 1987 accounted for over 70% of development expenditure;

- An ecosystem survey (1988-90) has been carried out with financial assistance from SPREP and the US Nature Conservancy;
- FAO/UNDP have funded an assessment of inshore fisheries in response to reports of declining landings;
- The Division of Environment and Conservation has received funding and assistance from SPREP, the New Zealand Bilateral Aid Programme, the Pacific Development and Conservation Trust, the Asian Development Bank, the Australian International Development Assistance Bureau, WWF, US Peace Corps, Australian Volunteers Abroad, US Nature Conservancy, UNDP and UNESCO.

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

- Rainwater harvesting is a priority and needs investigation;
- Hydro-electricity accounts for around 40% generation on Upolu.

7. INTERNATIONAL COOPERATION

- Aid donors have had a major impact through development projects. Such projects have, in the past, favoured forestry, agriculture and infrastructure at the expense of ecosystems. Donors are increasingly assisting with environment and conservation;
- UNDP has identified the need for greater coordination among aid donors in order to encourage environmental management and planning;
- Cooperation with the New Zealand government in the formation of a geographic information system data base.

8. EXPECTATIONS FROM UNCED

No direct mention

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YEMEN ARAB REPUBLIC

Full Title: National Report on Environment & Development
Date of Report: 1991
Version: Final
Original Language: Arabic
Other Language(s): -
Total Pages: 110 plus 11 annexes
National Contact Address:

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1. DRAFTING PROCESS

National Committee: Editors & Authors:

Council on the Protection of the Environment

Other Ministries and Government Agencies:

No specific mention

NGOs, Grassroots Organizations and Public Involvement:

No specific mention

2. PROBLEM AREAS

- Water pollution as well as salinity. Irrigation techniques used are not in consonance with the rational use of water;
- Pollution of the port of Aden due to oil leakage;
- Desertification, soil degradation and soil loss due to excessive grazing and to diminishing reserves of ground water;
- Deteriorating biological diversity;
- Lack of information on different soil types in Yemen;
- Galloping urbanization; Sana'a will exceed one million inhabitants in the near future; in addition to rural exodus;
- Brain drain with its negative impact on the society as a whole;
- Scarcity of resources needed to develop an integrated health system besides there being transport problems.

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

- National strategies exist on the protection of the environment, population and water. A Higher Council on water was set up in 1982;
- Programmes launched on promoting the role of women in development as well as on the need to reinforce the role played by mass organizations;
- Two laws are currently being discussed; one on water and the second on irrigation while two more laws on the marine environment and the need to protect it had already been promulgated in the light of the provisions set out in the United Nations Convention on the Law of the Sea;
- An Administration on Fish Resources was set up in 1970, attached to the Ministry of Agriculture. A strategy is being pursued by the same administration to define training needs of fishermen among other matters;
- Law No. 42 of 1991 regulates fishing and the protection of water resources;
- An Institute on Fisheries was set up at Aden in 1969 and also an Institute on Aquatic Living Resources for fish and prawn breeding;
- A national long-term strategy formulated to combat desertification together with nine programmes have been established to evaluate the impact of desertification.

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

- Need for more legislation on the protection of biological diversity;
- Need to discover renewable sources of energy and need to focus on recycling;
- The Ministry of Fish Resources needs assistance with planning for sustainable development;
- Material and technical assistance required to help the Administration on Marine Affairs and the Ministry of Oil and Minerals to handle possible oil spills;
- Technical assistance required from international organizations for the conservation of nature and natural resources. Improved management of natural areas should be sought;
- Water allocation and use needs reviewing. The monitoring system to control quantities of ground water being used must be updated. The official register on water sources should also be updated with a view to reusing drainage waters for irrigation;
- Need to formulate a plan to treat oil polluted water as well as promulgate an additional number of laws on the protection of the marine environment against pollution, in line with international conventions;
- Encourage investment in fisheries as well as strive to improve funding mechanisms so as to reinforce international efforts towards specifying new pollutants and ways of combatting them.

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

No specific mention

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

No specific mention

7. INTERNATIONAL COOPERATION

- Cooperation with the UNEP in the field of fish resources, marine environment and the development of coastal areas;
- Several projects financed by both international organizations and countries like the Netherlands and Germany in the northern governorates such as:
 1. Southern hills project;
 2. The comprehensive development project;
 3. The rural development project in Sanaa and Zamar;
 4. The rural development project for women at Khoulani;

The aim of the above-mentioned projects lies in increasing the awareness of rural women as well as raising their living standard and awakening their interest in public hygiene.

8. EXPECTATIONS FROM UNCED

No specific mention

9. TABLE OF CONTENTS FOR REPORT

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- 6-3 The role of Yemeni women in development
- 6-3-1 Background information on the development of Yemeni women
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Annexes

YUGOSLAVIA

Full Title: National Report to UNCED 1992
Date of Report: 1991
Version: Final
Original Language: Serbo-Croatian
Other Language(s): English
Total Pages: 118
National Contact Address: Federal Secretariat for Development,
 Environmental Division,
 Belgrade, Yugoslavia

UNDP Contact Address: N/A

1. DRAFTING PROCESS

National Committee: Editors & Authors:

The agency responsible for the preparation of the Report was the Federal Secretariat for Development of the Environmental Division. Special contributions in the preparation of individual sections were given by a number of associates (for details refer to the report).

Other Ministries and Government Agencies:

Federal Secretariat for Labour, Health, Veterans' Affairs and Social Policy; Federal Secretariat for Foreign Economic Relations; Federal Secretariat for Agriculture; Federal Secretariat for Transport and Communications; Federal Administration for International Scientific, Educational, Cultural and Technical Cooperation; Federal Hydrometereological Institute; Federal Bureau of Social Planning; Republic Secretariat for Territorial Management and Environmental Protection of Bosnia-Herzegovina; Ministry of Health of Montenegro; Ministry for Environmental Protection, Territorial Management and Construction of Croatia; Republic Secretariat for Urban Planning, Construction and Environmental Protection of Macedonia; Ministry of Health and Environmental Protection of Serbia; Federal Secretariat for Foreign Affairs and the Federal Statistical Office.

NGOs, Grassroots Organizations and Public Involvement:

The Federal Secretariat for Development organized a public discussion including representatives of the competent federal and republic authorities and organizations, scientific institutions, enterprises and NGOs, which formally verified the Report.

2. PROBLEM AREAS

Central Problems (page 66)

- Degradation of soil by erosion;
- Degradation of forest due to air pollution;
- Deposition of acid components and heavy metals;
- Loss of forest land;
- Pollution of the atmosphere;

- Pollution of rivers and underground waters by urban and industrial effluent;
- Pollution of the sea and coastal area by discharged phosphates and other nutrients;
- Jeopardy and loss of plant and animal species in some natural regions;
- Endangerment of architectural heritage by urban expansion, spreading of industrial and tourist zones;
- Noise in large settlements, in the vicinity of industrial facilities and plants;
- Higher incidence of bronchial asthma and malignant diseases, hydric epidemics of infectious intestinal diseases, and increased morbidity rates.

Global Problems Relevant to Yugoslavia

- The "greenhouse" effect;
- Damage to the ozone layer;
- Acid rains;
- Loss and degradation of forests;
- Disposal or processing of radioactive waste;
- Management of toxic waste;
- Polluting substances in the sea;
- Erosion and desertification;
- Endangered plant and animal species and loss of biological diversity, particularly in terms of the "green revolution" and genetic engineering.

3. PAST AND PRESENT CAPACITY BUILDING INITIATIVES

Legislation (page 89)

- The analysis of environmental legislation at the federal and republic levels;
- The analysis of EC and OECD legislation;
- Draft Long-Term Projection of the Protection and Management of the Architectural Heritage of Yugoslavia until year 2000;
- Draft Agreement on the Tenets of the Protection of Cultural and Natural Values of the Yugoslavia;
- Guidelines for the preparation of environmental impact studies and completed study on "Tourism and Environment".

Information and monitoring systems

- Project assignment for the future environmental information system;
- Establishment of a system to assess the social and economic justification of investments, including environmental criteria;
- Methodology for examining the state of the Sava river.

Institutions

- Creation of the Environmental Division within the Federal Secretariat of Development;

- Until end-1989 at the level of republics and provinces, environmental issues were a responsibility of republic authorities. Since 1990, most republics have begun to rechannel environmental affairs into separate agencies for environmental protection (p 100).

Policy, Planning and Strategy

- Unified methodology adopted to appraise the extent of forest dieback;
- Resolution on the Population Policy and the Resolution of the Federal Assembly on the principles of the health care policy, including environmental requirements;
- The UN International Decade of the Promotion of Drinking Water Supply and Environmental Sanitation;
- Adoption of the Conclusions of the Federal Assembly on the objectives for controlling water pollution.

The republics have also undertaken a number of activities introducing rehabilitation measures and imposing restrictions in some of the worst-hit areas.

4. RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT & DEVELOPMENT

Yugoslavia suggests priorities in environmental protection and ways to address them, giving special attention to the creation of stable sources of financing for environmental protection and promotion.

The country has prepared the Draft Policy of Environmental Protection and Promotion which is under public discussion.

The underlying principles of the Policy are as follows:

- the principle of sustainable development;
- the principle of integrating sectoral and environmental policies;
- the pursuit of economic and technological progress in a way which ceases to put intense pressure on the environment;
- the "polluter pays" principle as the linchpin of the policy to reduce pollution.

Measures are proposed for rehabilitation or development, and their implementation is scheduled to start immediately or within a certain timeframe.

The Report stated the most important proposed measures and activities are:

- legislation, environmental impact studies and institutional development;
- financing of environmental protection;
- technical and technological measures;
- strengthening of scientific and research capacities;
- raising of awareness and popularization of environmental protection;
- promotion of the environmental information system;
- fostering of non-governmental organizations.

5. FINANCIAL ARRANGEMENTS AND FUNDING REQUIREMENTS

The creation of a set of economic instruments to support and improve the quality of the environment is planned. Finance from foreign credits and existing funds, particularly the Federal Fund for Support to Technological Development, will be channelled to environmental protection projects over and above past levels (p 96).

6. ENVIRONMENTALLY SOUND TECHNOLOGIES

Optimization of the existing technologies in Yugoslavia will take time, considerable funding and international assistance. International assistance must be based on an appropriate development policy, legal provision, economic instruments, environmental labels, etc.

Through its international cooperation, in particular with OECD on the "Technology and Environment" project, and the programmes of other international organizations, Yugoslavia has gained an insight into the current work and programmes in the sphere of technologies

7. INTERNATIONAL COOPERATION (page 110)

Over the past two decades, Yugoslavia has been involved in a number of international activities, at the global, European, regional and bilateral levels. It is active in the UN system, in governmental and non-governmental international organizations.

UNDP is one of the principal sources of multilateral assistance for technical cooperation. Other multilateral assistance within the UN framework for development came from UNFPA, UNESCO, IAEA, WHO, FAO and UNEP. Numerous projects related to environmental protection receive World Bank loans.

At the European level, Yugoslavia cooperates with ECE (Economic Commission for Europe) through several programmes and conventions.

At the regional level, Yugoslavia maintains cooperation within the framework of regional UNDP programmes and of other specialized UN agencies. At that level, within the Pentagonal Cooperation (Austria, Italy, Hungary, Czechoslovakia and Yugoslavia), joint activities include, "Harmonisation of monitoring systems and creation of a data base" and "International Parks" (amongst others). Individual republics take part in cooperation with Alpine countries.

Yugoslavia is in the process of joining the Regional Centre for Environmental Protection in Budapest.

At the sub-regional level, Yugoslavia has extensive international cooperation on many issues of environmental protection and promotion of the Mediterranean through development.

Bilaterally, Yugoslavia cooperates with all its neighbours - Hungary, Italy, Austria, Rumania, Bulgaria, Greece, Albania. An agreement on environmental protection was signed with the USSR.

8. EXPECTATIONS FROM UNCED

UNCED should define integrated strategies and instruments for their implementation to prevent further degradation of the environment, at global and local levels, particularly in less developed countries.

The Conference should also offer, within the framework of free exchange of labour, goods, and capital, instruments of assistance to less developed countries to help develop sustainably.

In relation to global environmental problems, activities must continue towards proposing differentiated instruments and mechanisms reflecting global problems and the further development needs.

The Conference in Brazil should support the adoption of new international treaties to protect the climate, forest, biological diversity, and also every man's right to live in a sound environment-sound environmentally, economically, socially and politically - which would be gradually freed of all forms of segregation (p 118).

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APPENDICES

APPENDIX 1: GUIDELINES FOR NATIONAL REPORTS

UNITED NATIONS
GENERAL ASSEMBLY

Distr.
GENERAL

A/CONF.151/PC/8
and A/CONF.151/PC/8/Add.1
31 August 1990

ORIGINAL: ENGLISH

PREPARATORY COMMITTEE FOR THE UNITED
NATIONS CONFERENCE ON ENVIRONMENT
AND DEVELOPMENT

First session

6-31 August 1990

Item 2 (d) of the provisional agenda*

PREPARATIONS FOR THE UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT
ON THE BASIS OF GENERAL ASSEMBLY RESOLUTION 44/228 AND TAKING INTO ACCOUNT OTHER
RELEVANT GENERAL ASSEMBLY RESOLUTIONS: PREPARATIONS AT THE NATIONAL LEVEL:
GUIDELINES FOR NATIONAL REPORTS

Suggested guidelines for the preparation of national reports

Report of the Secretary-General of the Conference

INTRODUCTION

1. The Preparatory Committee for the United Nations Conference on Environment and Development, in decision II of its organizational session, requested the Secretariat to prepare detailed guidelines on the preparation of national reports for submission to the Committee at its first session. Those guidelines are presented below.
2. The Conference, in co-operation with the United Nations Development Programme and other multilateral and bilateral donors, will endeavour to respond to requests from developing countries for technical assistance in preparing their national reports. Voluntary contributions and funds are being actively sought for this purpose, and bilateral support has already been indicated. Efforts will be made to co-ordinate, to the extent possible, the various support initiatives.
3. The main purpose of national reports is to present the national perspectives and experience of Member States, together with information on policies, activities and issues at the national level which will assist the Conference in meeting its objectives as established in General Assembly resolution 44/228.
4. In order for the national reports to be incorporated in a timely manner in the preparatory process, it is suggested that they be made available to the Secretariat as early as possible during the first quarter of 1991. The suggested deadline for submission is July 1991.

I. OVERALL APPROACH

5. National reports should provide basic information on the existing situation in the country in terms of the interactions between the development process and the environment. They should focus on the strategic actions that are being carried out and/or planned, and their policy implications. They should give particular attention to areas in which environmental considerations interact with development goals. And the development process, analyzing the main factors that pose obstacles to development and the protection of the environment, the constraints and opportunities arising from such interactions and the manner in which they are managed, including measures that are currently in place or will be developed to change this situation at all levels of society - especially at the levels of economic and sectoral policies and their implementation. National reports should highlight :

- (a) national economic and sectoral development plans;
- (b) environment and natural resources problems, and;
- (c) actions to solve them, including policies and programmes.

6. Key procedures for addressing resource and environmental problems through legislation, policies, strengthening of institutions, education, public awareness, policy analysis, resource accounting and related requirements for technologies and funding should be identified. Of special importance is the identification of areas in which environmental and developmental issues at the national level affect, and are affected by, international conditions at the regional and global levels - areas which might be addressed by the Conference when considering international measures in support of national action to address those issues.

7. In order to ensure that the preparations for the Conference take fully into account the progress made at the national level since 1972 and address the concerns and interests of Member States, it is important that national reports provide relevant background information concerning problems that have emerged since 1972 and the progress made in dealing with them. In this connection countries should focus, as a matter of priority, on the main issues before the Conference, described in General Assembly resolution 44/228.

II. SUGGESTED PROCEDURES

8. While each country will adopt its own procedures for preparing national reports, it should include provisions for the following:

(a) The establishment of a special committee or working group for preparing the national report. It could be comprised of representatives of governmental ministries and agencies at various levels, including the local and municipal levels; in States of a federal character, it could include regional and provincial governments. Representatives of the non-governmental community - industry, trade unions, science - and other important constituencies such as environmental and developmental groups, women, youth, consumers and indigenous peoples could also be included. Participants might include experts in key disciplines such as natural and social sciences, economics, policy analysis, planning and resource management, and in areas such as energy, agriculture and urban affairs.

(b) The utilization, as a source of reference, of information available from recent reports such as country environmental profiles, environmental action plans, tropical forest action plans, national conservation strategies, state of the environment reports, national development plans, sector strategies and assessments reports and strategies of international agencies and funding organizations and other research and policy reports.

III. DRAFT OUTLINE FOR NATIONAL REPORTS

9. In order to facilitate the utilization of the national reports in the preparatory process, it is proposed that they conform to the following format and include the kinds of information referred to below.

A. Executive summary

10. Summarize the principal findings and conclusions of the report, highlighting the interrelationships between environment and development.

B. Development trends and environmental impacts

11. Describe developmental trends in terms of economic growth, demographic development, resource use and conservation of natural resources, equitable distribution of income and wealth, the role of the international economy (trade, finance, debt) etc. Sectors might include mining, energy, transportation, housing and infrastructure, industry, health and social services, education, environment, agriculture, parks and tourism, forestry and fisheries, economic planning and foreign affairs.

12. Describe the basic environmental and natural resource endowment of the country including land use and land cover; and the extent and use of croplands, pasture, forests rangelands, fresh-water fisheries, coastal resources, biological diversity, minerals, energy resources and other natural resources. Include references to transboundary and shared resources and include pertinent information on the amount of resources and extent of change and rates of change. Analyze the importance of natural resources in the recent economic development of the country in question such as: How dependent is the country on natural resources (consumptive and nonconsumptive use) measured in terms of production, employment, trade, quality of life, and other factors? How has this dependency changed over the past two decades? How it is likely to change in the next decade? How adequate is the basic environmental and natural resource endowment in relation to present and anticipated levels of population, rates of population growth and distribution and the standards and conditions of life to which the people of the country aspire? Whenever possible, it would be useful to use environmental and social indicators, including natural resource accounting procedures and quality of life indicators.

13. Identify and analyze key environmental and natural resources issues that are of major concern to the country. Where possible, the issues should reflect those identified in paragraph 12 of General Assembly resolution 44/228 such as protection of the atmosphere, protection of the quality and supply of fresh-water resources, protection of the oceans, protection and management of land resources, conservation of biological diversity, environmentally sound management of biotechnology, environmentally sound management of hazardous wastes and toxic chemicals, improvement of the living and working environment of the poor, and the protection of human health. For each issue, identify present conditions and trends, major causes, the relative importance or the degree of urgency, the level of risk, the degree of irreversibility, the impact and economic significance, and, if possible distributional aspects - who is affected most by pollution and resource degradation. These should be described and analyzed at the national level, incorporating information, including the best available statistical indicators, from the sub-national and transnational levels, as appropriate. Reference should be made to any environmental emergencies or catastrophes that may have arisen in the country and the means that have been established to anticipate, prevent and deal with them.

14. Countries, and more specifically, developing countries, could indicate their perceptions of what activities will require new and additional funding, and where possible, also indicate the extent of the funding required. Developed countries for their part, could indicate the pattern and extent of their official development assistance (ODA).

15. The analysis of major causes, examine the part played by, *inter alia*, the demand side (levels of *per capita* consumption, population growth), inappropriate production technologies, policy distortion that encourages unsustainable use of resources and the excessive use of the natural environment for waste disposal, gaps in the institutional and legal framework and lack of knowledge and awareness. The impact of poverty, external debt and other economic factors on the protection of the global environment and the need to develop effective measures to solve these problems could also be examined.

C. Response to environment/development issues

16. Outline the major approaches that have been developed and implemented at the national level over the past two decades to address environmental and resource problems as they relate to development, and indicate the principles that guide policy, the key goals, targets and priorities of development, and the policies, legislation and institutions that enable their achievement, taking into account environmental and sustainability considerations. Describe programmes, projects and other actions, indicating what progress has been made and what remains to be done. Indicate which critical events (social, economic, ecological, etc.) have led to changes in awareness, institution-building, or action, and their results.

1. Principles and goals

(a) Principles guiding action: e.g., polluter pays principle, internalization of environmental costs; effect-oriented policy measures; emission-oriented policy measures; resource-efficiency measures; structural source-oriented measures;

(b) Goals and targets: sustained use of renewable resources: water, forests, living resources, arable land etc.; pollution prevention, pollution control, impact mitigation; reduction in greenhouse gas emissions; toxic chemicals and hazardous substances management etc.

2. Policies, legislation and institutions

(a) Financing sustainable development; analysis of costs and benefits of incorporating environmental dimension into development; financing needs and constraints and how they are or may be met;

(b) Institutional development policies such as the establishment of new departments or councils on the environment; establishment of rules and regulations and enforcement procedures; preparation of national environmental reports and strategies etc.;

(c) Policy measures to ensure correct valuation of environmental impact, discourage over-exploitation of natural resources and encourage resource conservation and rehabilitation;

(d) Policy and other measures to strengthen scientific, research and technological capacities and their application and adaptation to the country's environmental and developmental needs;

(e) Private initiative policies and practices of business and parastatal organizations, trade unions, national industrial associations; and programmes of non-governmental organizations including environment and development groups and religious and cultural organizations; the role of women, youth, indigenous peoples and other important interest groups.

3. Programmes and projects

(a) Programmes and projects: the extent and type of activities undertaken to protect the environment and manage natural resources; effectiveness; measures of success;

(b) Programmes, projects and other activities of specific groups: economic and planning agencies; sectoral agencies and departments; the international development and environment community; donors; regional organizations; indigenous peoples, others;

(c) Promotion of public awareness and public education;

(d) Research, policy analysis and training: universities, institutes, businesses (on-the-job training), international institutes, non-governmental organizations, others;

- (e) Evaluating and reorienting development; environmental monitoring, indicators, networks and others;
- (f) Programmes on training, education and public awareness.

4. International cooperation

17. Indicate how best the international community can address environmental and development issues of direct concern to the country. Among the available means that could be considered are:

- (a) Treaties and conventions and other legal measures;
- (b) Policies and practices of major economic institutions: structural adjustment, debt restructuring, trade reform (GATT), others;
- (c) Policies and practices of major international and multinational corporations: training, technology, transfer, codes of good practices, investments, regulations, others;
- (d) Financial assistance: World Bank and regional banks, bilateral donors, businesses, private foundations, others;
- (e) Technological innovations and technology transfer: access to information, technology, training, others;
- (f) International training and research facilities;
- (g) United Nations and specialized agency assistance and support.

D. Procedures to be followed in preparing national reports

18. Information should be provided on the procedures actually followed in preparing the national report, including:

- (a) The organization specifically responsible for preparing the report;
- (b) Government ministries, departments and agencies contributing to it;
- (c) The approval process: At what level was it approved (ministerial?, Cabinet?, other);
- (d) Contributions of non-governmental organizations - industry, trade unions, sciences, women, youth, grass-root citizen groups, indigenous peoples etc.;
- (e) Public dialogue: Were public hearings held or other opportunities provided for public discussions of the report?

E. Anticipated results of the Conference

19. Indicate what results your country expects from the Conference.

APPENDIX 2: OVERVIEW OF NATIONAL REPORTS

UNITED NATIONS
GENERAL ASSEMBLY

Distr.
GENERAL

A/CONF.151/PC/98
12 February 1992

ORIGINAL: ENGLISH

PREPARATORY COMMITTEE FOR THE UNITED
NATIONS CONFERENCE ON ENVIRONMENT
AND DEVELOPMENT

Fourth session

New York, 2 March-3 April 1992

Plenary session

Item 2 of the provisional agenda

PREPARATIONS FOR THE UNITED NATIONS CONFERENCE ON ENVIRONMENT
AND DEVELOPMENT ON THE BASIS OF GENERAL ASSEMBLY RESOLUTION
44/228 AND TAKING INTO ACCOUNT OTHER RELEVANT GENERAL
ASSEMBLY RESOLUTIONS

Overview of national reports*

Report of the Secretary-General of the Conference

I. INTRODUCTION

1. The present report is a synthesis of 72 national and 2 subregional reports analysed by the Conference secretariat reflecting the main findings and trends. Unfortunately not all reports have been received; nor has the secretariat been able to analyse fully all the late reports, owing to time constraints. Further analysis and processing of data and follow-up action will have to be done over months and perhaps years to come.

2. Only 15 reports were received by the end of July 1991, the official deadline, and by mid-November, the extended deadline and cut-off date for the synthesis report, 72 reports had been received. The analysed reports total some 11,000 pages (without annexes), with approximately two thirds in English and one third in other languages (French 2,000 and Spanish 1,000 pages). Forty-two reports were presented to the secretariat in English, 9 in another language with an English translation, 11 in French and 5 in Spanish (see attachment 1). A handful of countries have withdrawn their reports for the purpose of updating and revising them.

3. Unfortunately a large number of important countries, in terms of their size, population and economy, had not completed their reports at the time this synthesis was prepared. Thus countries with an estimated population of some 2.25 billion people (or roughly half of the earth's population) have not been covered.

Guidelines

4. At the first session of the Preparatory Committee, held at Nairobi, the Committee established suggested guidelines as reflected in document A/CONF.151/PC/8 and Add.1. The guidelines proposed that the national reports address, *inter alia*, development trends and environmental impacts, response to environment/development issues, procedures for preparing reports and the anticipated results of the Conference.

Secretariat analysis procedure

5. In its analysis of the reports the secretariat has tried to address those main elements suggested in the guidelines. The secretariat has to the extent possible analysed the reports in chronological order giving preference to final reports with diskette versions. Lack of diskette versions of reports has slowed the review process considerably. As part of the analysis process, brief five-to-seven-page "contents reviews" have been prepared for some 40 countries. The same reports have also been entered on the secretariat computerized database. The remaining reports have been analysed and indexed manually in preparation for this synthesis. The intention of the secretariat is to prepare contents reviews of as many reports as possible. The full unaltered reports will also be stored on a database, which will facilitate retrieval of information from the reports for future follow-up action, research, etc. Only reports submitted in a usable diskette format have been entered on the database. About half of reports have to date been treated in this way. The "contents reviews" are not to be taken as official secretariat documents but merely as short summaries of the main points in the reports concerned. No doubt there can be different interpretations but this is at the same time also a reflection on how a report can be understood by a reader, perhaps with less in-depth knowledge of the country concerned than their report writers. The "contents reviews" have been compiled together in a "quick-reference compendium" which could be made available to interested parties and the public at large. Samples will be available at the fourth session of the Preparatory Committee.

6. The reports have been analysed principally by a team of professionals hired for this purpose, under funding provided by the Government of Finland to cover the reports from least developed countries, supplemented by secretariat funding. The same funds have also been used for securing the necessary equipment to carry out this analysis. Reports have also been analysed by other secretariat staff and experts.

UNCED Agenda 21 Information System

7. The retrieval system used by the secretariat is CDS/ISIS (Computerized Documentation System / Integrated Set of Information Systems). The national reports system is envisaged as a part of the larger Agenda 21 information support system (AGIS). The main descriptors used in coding the reports can be found in attachment 2. These descriptors are the result of in-house standardization of the reports to facilitate analysis and other use of the material therein. The contents of the reports have not been changed. The retrieval system, once fully operational will, however, permit searches of the database by whatever word or words needed, thus allowing for very specific research work.

II. MAIN FINDINGS

8. The main findings of the reports are summarized below and indicate not only global and regional priorities emerging from the reports but also sectoral and cross-cutting issues as they emerge. These may also be described separately in other documents presented to the Preparatory Committee. The findings and figures in this report are indicative of an issue of concern raised by the countries involved. It has not been possible at this stage, because of the unevenness of the data in the reports, to introduce meaningful qualitative global or even regional data. This area needs to be explored further.

III. ANTICIPATED RESULTS OF THE CONFERENCE

9. The guidelines suggested that reports specifically address the subject of expectations from the Conference; at least 37 reports out of 72 responded to this under a separate heading or as a specific item. But almost half of the reports made no special reference to expectations from the Conference. Often the expectations are included in the text in different parts of the reports, hence making the analysis time consuming. This chapter often also overlaps with another suggested chapter in the Guidelines labelled "Recommendations and priorities on environment and development" dealt with later in this document.

10. Of the countries that responded under this heading, two thirds stressed the need for commitment regarding additional funding, and more than half suggested access to environmentally sound technology under favourable conditions, or free access to it, to enhance capacity-building. Approximately one third specifically addressed the Earth Charter, the various conventions and agreements and stated specifically that Agenda 21 should be action-oriented. These figures are certainly higher when one includes the more detailed recommendations in other parts of the reports.

11. Developing countries generally expect genuine commitment or proof by the more developed countries that they are prepared to make changes in the world economy and to provide access to new and additional funding, appropriate technology and to assist with capacity-building. These same countries also see the Earth Summit as a forum for the international community to make concrete decisions regarding our common global concerns. More than a quarter of the developing country reports specifically expressed the wish for a stronger multilateral United Nations system to assist in this process. The necessity for improved regional cooperation was also often stressed, and a number of general statements were made about global commitments and the need to cooperate. Other topics mentioned under this heading include the need to address the debt problem, poverty, natural disaster prevention and fair trade.

12. The references to a strengthened United Nations system usually mention the need for closer cooperation between UNEP and UNDP. They also cover the need to integrate bilateral programmes with multilateral ones. Adequate follow-up to the Conference is also recommended.

13. The analysed reports of industrialized countries, which also happen to be major aid donors, support the general expectations of developing countries by stating that the Earth Summit should reach specific and concrete decisions regarding funding, technology issues and capacity-building leading to an action-oriented Agenda 21 programme. A number of developing country reports specifically refer to the Conference process as a way of learning from other developing countries and thus gaining experience. Likewise they are also willing to share their knowledge and experiences. The country-specific issues and problems are dealt with separately under other headings in this report.

14. Regarding regional cooperation, a number of countries with common environmental concerns (e.g. river-basin countries, desert countries, small island States and countries experiencing transboundary pollution) have expressed the need for stronger regional cooperation.

IV. THE NATIONAL REPORT DRAFTING PROCESS

15. This section is elaborated in somewhat greater detail than expected since a large number of Governments in presenting their reports to the secretariat have specifically commented on the preparatory and consultative processes used in preparing national reports. These processes, often described as unique or most interesting, have included many entities or representatives of the population not usually involved.

16. The guidelines, while recommending that each country adopt its own procedures, nevertheless suggested that a special committee or working group be established which could be comprised of representatives of governmental ministries and agencies at various levels, representatives of the non-governmental community - industry, trade unions, science - and other important constituencies such as environmental and developmental groups, women, youth, consumers and indigenous peoples, in addition to experts in key disciplines such as natural and social sciences, economics, energy, agriculture and urban affairs, etc.

17. Of the 72 countries included, 90 per cent indicated that specific committees on the Conference had been established to prepare for the Earth Summit in Rio de Janeiro and also to prepare the national report. In 50 countries, or 70 per cent, there appears to have been full and close participation from the non-governmental sectors, especially citizens' affinity groups. Women were specifically mentioned as being represented in at least 25 per cent of the countries and in some cases separate chapters or reports were written on the role of women. Countries seldom made any mention of the nature of the drafting process. At least 29 countries (40 per cent) arranged national seminars or workshops, which may well have included women representatives, to discuss or prepare the national level inputs to the Conference (see attachment 3).

Ministerial involvement in the drafting process

18. Least developed countries reported that a greater number of ministries were involved in the drafting of their national reports than did industrialized countries (more than 50 per cent of country reports from least developed countries drew on the contributions of between 5 and 9 ministries, compared to 40 per cent for industrialized countries; one third of least developed countries had over 10 ministries involved in the process, compared to only 15 per cent of industrialized) (see attachment 4).

19. On the other hand, industrialized countries had specific ministries, departments and commissions for the environment coordinating the drafting process more often than least developed countries did (70 per cent of the time compared to 55 per cent of the time for least developed countries). In the case of the least developed countries (and developing countries), coordinating ministries were often ministries of planning, tourism, natural resources or of forestry.

V. RELATIONSHIP BETWEEN DEVELOPMENT AND ENVIRONMENT

20. One general remark is that environmental issues appear to be better covered than developmental ones. It is telling perhaps that reports sometimes indicate names and seemingly very exact numbers for animal or plant species extinct or close to extinction but equally exact figures on population or cost estimates of needs are much more scarce or vague. The percentage figures are only indicative of how many reports mention certain issues (see attachment 5).

Agricultural pressures

21. Sixty reports, or approximately 85 per cent of the 72 reports received, refer to problems or issues directly linked with agriculture. These issues most frequently concern the dangers of excessive or incorrect use of agro-chemicals (40 per cent). Of reports describing agricultural issues about half refer to soil erosion and soil degradation. Other problems described are over-exploitation, or poor soils, poor or incorrect agricultural practices and salinization.

Demographic pressures

22. Roughly 70 per cent of the reports make reference to demographic pressure as causing concern of one type or another. Of reports describing demographic pressure, 40 per cent mention rapidly increasing population and urbanization problems. Other issues are inadequate housing, i.e. growing slums, etc. The demographic pressures are also often mentioned together with waste management problems, which in turn are reflected in concerns about health and sanitation. Many report health and sanitation-related problems, particularly in urban centres. A number of reports touch upon the negative effects of poorly planned or controlled tourism-related activities. Unemployment is an increasing problem, some expressing particular concerns about unemployed youth. A number of reports express the need for clear national policies on population to address the concerns of population pressure.

Poverty

23. The regional ministerial-level preparatory meetings listed poverty as one of the most important factors, if not the most important impediment to the achievement by developing countries of sustainable development. Poverty as a subject is dealt with separately in document A/CONF/PC.151/100/Add.2. National reports also, in varying detail, dwell on the issue of poverty. Generally the reports do cover important indicators of poverty such as low incomes, inadequate living conditions, low GNP and a heavy debt burden as well as many of the elements mentioned under demographic pressures.

Pressures on forests

24. Pressures on forests are closely interlinked with the demographic and agricultural pressures referred to above. Pressures on forests are mentioned in 70 per cent of the reports and they stem from the use of wood as fuel (30 per cent of reports mentioning forest pressures), logging and clearing, agricultural encroachment, urban encroachment and squatting and forest fires.

25. These pressures on forests are also directly linked to habitat loss. Forty per cent of all analysed national reports bring up habitat loss and also refer to loss of biological diversity and loss of fragile ecosystems.

26. In developing countries forests are under pressure from agricultural expansion and from population pressure in the ongoing quest for more land and fuel wood. Only a few of the developing country reports analysed so far give indications of serious effects from the forestry industry and logging. This figure is also a reflection of the fact that several major forest countries have not yet submitted reports. With depletion of forests there is, of course, the related destruction of biological diversity, sometimes linked with local climate change.

27. In the reports from industrialized nations, including the central and eastern European countries, the concerns regarding forests and forestry are linked to acidification and pollution problems primarily due to emissions from industry and transport, often transboundary in nature, which have a devastating effect on forests. At least two reports from major industrialized forest countries mention the harmful effect of poor logging practices and clear cutting.

Waste management and pollution

28. At least 42 reports or close to 60 per cent indicate that countries have waste management problems of a magnitude that concern them now or will concern them in the immediate future. These problems are linked with the use of agro-chemicals (in at least 27 countries, or almost 40 per cent), household waste (35 per cent) and industrial waste including toxic waste (30 per cent). Coastal and sea pollution is mentioned in 40 per cent of the reports and 50 per cent of the reports express concern about air pollution, sometimes localized to cities or regions; almost 30 per cent mention freshwater pollution including in some cases groundwater pollution; and soil pollution. Specific references to acidification of water, soil and air are frequently made in the industrialized countries. The reports from central and eastern Europe describe sometimes alarming waste management problems, and have identified several national level disaster areas sometimes with transboundary effects. A number of reports, in particular industrialized country reports, state that 50 to 90 per cent of air pollution is transboundary and external to the country concerned.

Water shortage, harsh climate and/or desertification

29. Limited access to freshwater is reported by 35 per cent of the countries, and 75 per cent of these same countries also report waste management problems. It appears that the access to water is often a question of water quality as well as overall availability. A number of countries make reference to a hostile climate with uneven precipitation and climate change; and one fourth of countries with water shortage refer to desertification. These countries are almost all in Africa. Desertification is linked both to the agricultural practices and forest destruction described above. All but one of the countries reporting desertification are developing countries. One large developing country describes desertification in certain provinces as "catastrophic".

Natural disasters

30. A significant number of national reports express concern about natural disaster and disaster response. Almost all island and many coastal States mention the danger of possible sea-level rise. Disasters like floods, earthquakes and volcanic eruption as well as man-made armed conflicts are mentioned in a number of reports.

VI. SUMMARY OF RECOMMENDATIONS AND PRIORITIES ON ENVIRONMENT AND DEVELOPMENT AS DESCRIBED IN THE REPORTS

Priority areas

31. As can be expected the priority areas to be addressed correspond with problem areas identified. Approximately 65 per cent of the reports list conservation of the natural resources as a top priority stressing preventive measures over corrective ones. Agriculture and waste management-related issues are mentioned in nearly half of the reports as the most urgent, closely followed by demographic pressure and forestry-related issues. Water and water resources management is singled out in 35 per cent of all reports although this figure most likely is also included in the broader topic of natural resource protection.

32. There are differences depending on the developmental level of a country. For instance, the industrialized countries see the waste management issues as more pressing, with particular concern for air and water pollution (mentioned in 85 to 95 per cent of industrialized country reports), whereas population, urbanization and quality of life (poverty) issues, as well as the above-mentioned agriculture and forest-related issues, are more important to developing countries, in particular the least developed. Other frequently mentioned priorities include energy, food security, debt and desertification.

Means of implementation

33. The above figures are probably lower than in paragraphs 20 to 30 listing main areas of concern because most reports have concentrated on the means for addressing the problems. To address these issues the reports appear to concentrate on the following issues. Strengthening of legislation and enforcement (70 per cent of reports); better planning and coordination (65 per cent); capacity-building including institutional strengthening and research (65 per cent). Some 50 to 60 per cent of reports stress the need for awareness building and environmental education as a priority, as well as a participatory process involving non-governmental organizations which is specifically mentioned in some 30 per cent of reports.

34. Other significant means for addressing the problems are strengthened regional and international cooperation (24 to 35 per cent) and funding mechanisms.

Funding

35. Developing countries invariably stress the need for additional funding over and above present technical assistance and a number of countries make references to the need for a "green fund". The analysed reports from the industrialized countries also support the need for additional funding and pledge their commitment for such funds. The funding needs are considerable and will be addressed separately in the document on financial resources and mechanisms, A/CONF.151/PC/101. Generally speaking, figures on funding needs or the cost of elimination of problems are not sufficiently covered in most reports. As can be expected, industrialized countries tend to have more exact figures although a number of developing country reports also provide good figures at least in some sectors.

Capacity-building

36. Developing countries report a need for capacity adjustments and strengthening to address environment and development-related issues. The capacity-building initiatives, either under way or contemplated, as outlined in the national reports, number in the thousands. Some reports are quite specific about programmes and actions needed,

while others are rather general. It is not feasible to summarize in a comprehensive yet succinct manner all the capacity-building proposals into this synthesis report. Most of the suggestions in the reports can best be dealt with at the national level, and these actions form one of the most important ingredients in the follow-up to the Conference.

37. Capacity-building as a general subject is dealt with separately in documents A/CONF.151/PC/100/Add.11 and A/CONF.151/PC/100/Add.26. UNDP and the Conference secretariat have commissioned a study on capacity-building requirements in developing countries which will be presented separately. Many of the elements in the national reports under this heading will be elaborated in further detail in this study.

VII. EVALUATION OF THE PROCESS

What worked?

38. In reviewing the preparatory process for the national-level preparation and, in particular the national report preparations, one notes a certain pattern or process that seems to have been used in producing a report.

39. A national committee was convened. Consultants were often engaged to prepare draft reports. Most frequently the Environment Ministry or government environment entity concerned was charged with coordinating the work at the national level; but, judging from reports and correspondence, the final versions of the reports were often discussed during national seminars or meetings and then approved by the committee, sometimes a committee of ministers, or even by parliaments. Financial support from a number of sources through the UNDP field offices and a United Nations presence has facilitated preparations in many developing countries.

Process

40. The national report preparations have, in many countries, created a unique "consultative process" mobilizing thousands of people around the world. There are reports that list several pages of participants. The magnitude and the number of problems identified as being part of the development process are so great that Governments alone cannot address and correct ongoing processes and take the necessary steps to change directions. The Conference process has therefore highlighted not only the usefulness but also the necessity of the involvement of the non-governmental sector of society, such as private industry and a number of affinity groups and associations.

Eco-regional and South-South pooling of resources

41. A number of eco-regional country groupings have also contributed actively to the Conference process, which is reflected in spontaneous regional meetings and reports. It may be advantageous to use these regional groups for regional monitoring within themselves to carry out the monitoring of progress. In this way especially small countries with limited resources could expand their capacities by pooling resources, thus becoming more aware of the problems of neighbouring countries. Examples of such regional groupings which have actively contributed to the process are the Sahelian countries, the Southern African Development Coordination Conference (SADCC) countries, the Amazonian countries, the Pacific island developing countries and the Arctic countries, to mention just a few. This is also touched upon in document A/CONF.151/PC/100/Add.26.

42. A number of developing countries have also expressed the view that they hope to learn from others and share their own experiences with others. The national reports contain a great deal of information that potentially is of great direct value for developing countries provided the means for South-South exchange of experiences exist.

43. From the above synthesis it is clear that a lot of momentum has been generated in most States preparing not only the national reports but also for the Conference itself. It is important that this momentum not be lost after the Conference and that some follow-up action be taken. Some of the processes and mechanisms used, such as Conference Committees, may well be worth preserving in one form or another. It is essential that the symbiotic process which has emerged or been strengthened in most countries between Governments and non-governmental sectors continue to address the issues raised at the national level.

44. There are many players at the international level that can assist developing country Governments in maintaining and strengthening the process. Within the United Nations system itself, the key players, because of their mandates, will be UNDP and UNEP supported by the specialized agencies. The role of the World Bank and regional development banks, the regional commissions of the United Nations, as well as other regional organizations and programmes, should be fully considered.

Attachment 1: National Reports -- Classification of Terms

Air:

- A1: atmosphere
- A2: climate
- A3: ozone layer
- A4: air pollution
- A5: greenhouse effect
- A6: acidification

Biological:

- B1: biological diversity
- B2: flora
- B3: fauna

Waste:

- C1: waste management
- C2: hazardous wastes
- C3: solid wastes
- C4: toxic chemicals
- C5: illegal traffic
- C6: noise
- C7: radioactive waste
- C8: fertilizers
- C9: pesticides

Social / Political:

- D1: impact of war
- D2: legislation
- D4: state liability
- D3: sovereignty

Environment:

- E1: environment (history)
- E2: environment (future)

Finance-related:

- F1: financing
- F2: development aid

Welfare:

- H1: living conditions
- H2: health
- H3: quality of life
- H4: working conditions
- H5: social security
- H6: sanitation

Information:

- I1: monitoring
- I2: communication
- I3: information
- I4: cultural heritage
- I5: environmental assessment

Land:

- L1: land resources
- L2: forest resources
- L3: deforestation
- L4: desertification
- L5: erosion
- L6: soil
- L7: soil degradation
- L8: drought
- L9: land tenure
- L10: wetlands

Macroeconomic:

- M1: debt
- M2: trade
- M3: economic growth
- M4: income
- M5: wealth distribution
- M6: production patterns
- M7: consumption patterns
- M8: government expenditure
- M9: tax
- M10: subsidies
- M11: employment
- M12: informal sector
- M13: investment
- M14: inflation

Level:

- N1: global level
- N2: national level
- N3: regional level
- N4: international cooperation
- N5: local level

Organizations:

- O1: international organizations
- O2: intergovernmental organizations
- O3: non-governmental organizations
- O4: UN system
- O5: regional organizations
- O6: transnational corporations
- O7: grassroots

Population / Special Groups:

- P1: population
- P2: rural
- P3: urban
- P4: women

P5: youth
P6: vulnerable groups
P7: poverty
P8: children
P9: migration
P10: human resources
P11: ethnic groups
P12: indigenous population

Conservation:

R1: resource status
R2: nature conservation
R3: restoration
R4: recycling
R5: parks
R6: protection
R7: afforestation
R8: natural disasters
R9: fragile zones

Sectoral:

S1: mining
S2: energy
S3: industry
S4: infrastructure
S5: transport
S6: housing
S7: services
S8: health services
S9: social services
S10: education
S11: tourism
S12: agriculture
S13: animal husbandry
S14: fisheries
S15: forestry
S16: hunting
S17: gathering
S18: raw materials
S19: fishing

Technology-related:

T1: technology transfer
T2: human capital
T3: science
T4: research
T5: equipment
T6: information exchange
T7: biotechnology
T8: technology

Water:

W1: freshwater resources
W2: seas
W3: brackish water
W4: groundwater

W5: eutrophication
W6: water pollution
W7: rainfall

General:

Z1: background
Z2: recommendations
Z3: problem areas
Z4: existing programmes
Z5: environmental policy
Z6: sustainable
development



IN OUR HANDS