

JOHANNESBURG SUMMIT 2002

MAURITIUS



COUNTRY PROFILE



UNITED NATIONS

INTRODUCTION - 2002 COUNTRY PROFILES SERIES

Agenda 21, adopted at the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992, underscored the important role that States play in the implementation of the Agenda at the national level. It recommended that States consider preparing national reports and communicating the information therein to the Commission on Sustainable Development (CSD) including, activities they undertake to implement Agenda 21, the obstacles and challenges they confront, and other environment and development issues they find relevant.

As a result, in 1993 governments began preparing national reports for submission to the CSD. After two years of following this practice, the CSD decided that a summarized version of national reports submitted thus far would be useful. Subsequently, the CSD Secretariat published the first Country Profiles series in 1997 on the occasion of the five-year review of the Earth Summit (Rio + 5). The series summarized, on a country-by-country basis, all the national reports submitted between 1994 and 1996. Each Profile covered the status of all Agenda 21 chapters.

The purpose of Country Profiles is to:

- Help countries monitor their own progress;
- Share experiences and information with others; and,
- Serve as institutional memory to track and record national actions undertaken to implement Agenda 21.

A second series of Country Profiles is being published on the occasion of the World Summit on Sustainable Development being held in Johannesburg from August 26 to September 4, 2002. Each profile covers all 40 chapters of Agenda 21, as well as those issues that have been separately addressed by the CSD since 1997, including trade, energy, transport, sustainable tourism and industry.

The 2002 Country Profiles series provides the most comprehensive overview to date of the status of implementation of Agenda 21 at the national level. Each Country Profile is based on information updated from that contained in the national reports submitted annually by governments.

Preparing national reports is often a challenging exercise. It can also be a productive and rewarding one in terms of taking stock of what has been achieved and by increasing communication, coordination and cooperation among a range of national agencies, institutions and groups. Hopefully, the information contained in this series of Country Profiles will serve as a useful tool for learning from the experience and knowledge gained by each country in its pursuit of sustainable development.

NOTE TO READERS

The 2002 Country Profiles Series provides information on the implementation of Agenda 21 on a country-by-country and chapter-by-chapter basis (with the exception of chapters 1 and 23, which are preambles). Since Rio 1992, the Commission on Sustainable Development has specifically addressed other topics not included as separate chapters in Agenda 21. These issues of trade, industry, energy, transport and sustainable tourism are, therefore, treated as distinct sections in the Country Profiles. In instances where several Agenda 21 chapters are closely related, for example, chapters 20 to 22 which cover environmentally sound management of hazardous, solid and radioactive wastes, and chapters 24 to 32 which refer to strengthening of major groups, the information appears under a single heading in the Country Profile Series. Lastly, chapters 16 and 34, which deal with environmentally sound management of biotechnology, and transfer of environmentally sound technology, cooperation, capacity-building respectively, are presented together under one heading in those Country Profiles where information is relatively scarce.

TABLE OF CONTENTS

CHAPTER 2: INTERNATIONAL COOPERATION TO ACCELERATE SUSTAINABLE DEVELOPMENT IN DEVELOPING COUNTRIES AND RELATED DOMESTIC POLICIES.....	1
CHAPTER 2: INTERNATIONAL COOPERATION TO ACCELERATE SUSTAINABLE DEVELOPMENT IN DEVELOPING COUNTRIES AND RELATED DOMESTIC POLICIES - TRADE.....	5
CHAPTER 3: COMBATING POVERTY.....	6
CHAPTER 4: CHANGING COMSUMPTION PATTERNS.....	11
CHAPTER 4: CHANGING CONSUMPTION PATTERNS - ENERGY.....	12
CHAPTER 4: CHANGING CONSUMPTION PATTERNS - TRANSPORT.....	13
CHAPTER 5: DEMOGRAPHIC DYNAMICS AND SUSTAINABILITY.....	14
CHAPTER 6: PROTECTING AND PROMOTING HUMAN HEALTH.....	16
CHAPTER 7: PROMOTING SUSTAINABLE HUMAN SETTLEMENT DEVELOPMENT.....	20
CHAPTER 8: INTEGRATING ENVIRONMENT AND DEVELOPMENT IN DECISION-MAKING.....	23
CHAPTER 9: PROTECTION OF THE ATMOSPHERE.....	25
CHAPTER 10: INTEGRATED APPROACH TO THE PLANNING AND MANAGEMENT OF LAND RESOURCES.....	27
CHAPTER 11: COMBATING DEFORESTATION.....	29
CHAPTER 12: MANAGING FRAGILE ECOSYSTEMS: COMBATING DESERTIFICATION AND DROUGHT.....	30
CHAPTER 13: MANAGING FRAGILE ECOSYSTEMS: SUSTAINABLE MOUNTAIN DEVELOPMENT.....	31
CHAPTER 14: PROMOTING SUSTAINABLE AGRICULTURE AND RURAL DEVELOPMENT.....	33
CHAPTER 15: CONSERVATION OF BIOLOGICAL DIVERSITY.....	35
CHAPTER 16 AND 34: ENVIRONMENTALLY SOUND MANAGEMENT OF BIOTECHNOLOGY AND TRANSFER OF ENVIRONMENTALLY SOUND TECHNOLOGY, COOPERATION AND CAPACITY-BUILDING.....	38
CHAPTER 17: PROTECTION OF THE OCEANS, ALL KINDS OF SEAS, INCLUDING ENCLOSED AND SEMI-ENCLOSED SEAS, AND COASTAL AREAS AND THE PROTECTION, RATIONAL USE AND DEVELOPMENT OF THEIR LIVING RESOURCES.....	41
CHAPTER 18: PROTECTION OF THE QUALITY AND SUPPLY OF FRESHWATER RESOURCES: APPLICATION OF INTEGRATED APPROACHES TO THE DEVELOPMENT, MANAGEMENT AND USE OF WATER RESOURCES.....	43
CHAPTER 19: ENVIRONMENTALLY SOUND MANAGEMENT OF TOXIC CHEMICALS, INCLUDING PREVENTION OF ILLEGAL INTERNATIONAL TRAFFIC IN TOXIC AND DANGEROUS PRODUCTS.....	45
CHAPTER 20 TO 22: ENVIRONMENTALLY SOUND MANAGEMENT OF HAZARDOUS, SOLID AND RADIOACTIVE WASTES.....	46

CHAPTER 24 TO 32: STRENGTHENING THE ROLE OF MAJOR GROUPS.....	51
CHAPTER 33: FINANCIAL RESOURCES AND MECHANISMS.....	63
CHAPTER 35: SCIENCE FOR SUSTAINABLE DEVELOPMENT.....	64
CHAPTER 36: PROMOTING EDUCATION, PUBLIC AWARENESS AND TRAINING.....	65
CHAPTER 37: NATIONAL MECHANISMS AND INTERNATIONAL COOPERATION FOR CAPACITY- BUILDING IN DEVELOPING COUNTRIES.....	67
CHAPTER 38: INTERNATIONAL INSTITUTIONAL ARRANGEMENTS.....	69
CHAPTER 39: INTERNATIONAL LEGAL INSTRUMENTS AND MECHANISMS.....	71
CHAPTER 40: INFORMATION FOR DECISION-MAKING.....	74
CHAPTER: INDUSTRY.....	75
CHAPTER: SUSTAINABLE TOURISM	76

LIST OF COMMONLY USED ACRONYMS

ACS	Association of Caribbean States
AMCEN	Africa Ministerial Conference on the Environment
AMU	Arab Maghreb Union
APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
CARICOM	The Caribbean Community and Common Market
CBD	Convention on Biological Diversity
CIS	Commonwealth of Independent States
CGIAR	Consultative Group on International Agricultural Research
CILSS	Permanent Inter-State Committee for Drought Control in the Sahel
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
COMESA	Common Market for Eastern and Southern Africa
CSD	Commission on Sustainable Development of the United Nations
DESA	Department for Economic and Social Affairs
ECA	Economic Commission for Africa
ECCAS	Economic Community for Central African States
ECE	Economic Commission for Europe
ECLAC	Economic Commission for Latin America and the Caribbean
ECOWAS	Economic Community of West African States
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
ESCAP	Economic and Social Commission for Asia and the Pacific
ESCWA	Economic and Social Commission for Western Asia
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FIDA	Foundation for International Development Assistance
GATT	General Agreement on Tariffs and Trade
GAW	Global Atmosphere Watch (WMO)
GEF	Global Environment Facility
GEMS	Global Environmental Monitoring System (UNEP)
GESAMP	Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection
GHG	Greenhouse Gas
GIS	Geographical Information Systems
GLOBE	Global Legislators Organisation for a Balanced Environment
GOS	Global Observing System (WMO/WWW)
GRID	Global Resource Information Database
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
IAEA	International Atomic Energy Agency
ICSC	International Civil Service Commission
ICSU	International Council of Scientific Unions
ICT	Information and Communication Technology
ICTSD	International Centre for Trade and Sustainable Development
IEEA	Integrated Environmental and Economic Accounting

IFAD	International Fund for Agricultural Development
IFCS	Intergovernmental Forum on Chemical Safety
IGADD	Intergovernmental Authority on Drought and Development
ILO	International Labour Organisation
IMF	International Monetary Fund
IMO	International Maritime Organization
IOC	Intergovernmental Oceanographic Commission
IPCC	Intergovernmental Panel on Climate Change
IPCS	International Programme on Chemical Safety
IPM	Integrated Pest Management
IRPTC	International Register of Potentially Toxic Chemicals
ISDR	International Strategy for Disaster Reduction
ISO	International Organization for Standardization
ITTO	International Tropical Timber Organization
IUCN	International Union for Conservation of Nature and Natural Resources
LA21	Local Agenda 21
LDCs	Least Developed Countries
MARPOL	International Convention for the Prevention of Pollution from Ships
MEAs	Multilateral Environmental Agreements
NEAP	National Environmental Action Plan
NEPAD	New Partnership for Africa's Development
NGOs	Non-Governmental Organizations
NSDS	National Sustainable Development Strategies
OAS	Organization of American States
OAU	Organization for African Unity
ODA	Official Development Assistance/Overseas Development Assistance
OECD	Organisation for Economic Co-operation and Development
PPP	Public-Private Partnership
PRSP	Poverty Reduction Strategy Papers
SACEP	South Asian Cooperative Environment Programme
SADC	Southern African Development Community
SARD	Sustainable Agriculture and Rural Development
SIDS	Small Island Developing States
SPREP	South Pacific Regional Environment Programme
UN	United Nations
UNAIDS	United Nations Programme on HIV/AIDS
UNCED	United Nations Conference on Environment and Development
UNCCD	United Nations Convention to Combat Desertification
UNCHS	United Nations Centre for Human Settlements (Habitat)
UNCLOS	United Nations Convention on the Law of the Sea
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNDRO	Office of the United Nations Disaster Relief Coordinator
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change

UNFF	United Nations Forum on Forests
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNIDO	United Nations Industrial Development Organization
UNIFEM	United Nations Development Fund for Women
UNU	United Nations University
WFC	World Food Council
WHO	World Health Organization
WMO	World Meteorological Organization
WSSD	World Summit on Sustainable Development
WTO	World Trade Organization
WWF	World Wildlife Fund
WWW	World Weather Watch (WMO)

CHAPTER 2: INTERNATIONAL COOPERATION TO ACCELERATE SUSTAINABLE DEVELOPMENT IN DEVELOPING COUNTRIES AND RELATED DOMESTIC POLICIES

Decision-Making: A broad spectrum of stakeholders from different Ministries, private sector and financial institutions are crucial in assisting Mauritius to play its role actively in the issue of global sustainable development. Environmental protection requires initiatives at the political level, as well as collaboration with NGOs, women and youth organisations, the private sector and civil society in general. This implies a national political commitment to ensure that development processes do not destroy the resource base on which sustainable development depends. Legal, administrative and institutional arrangements are being taken to ensure that all the elements are taken on board to achieve sound environmental management for sustainable development.

At the national level, there is the Regional Co-operation Council (RCC), apex advisory body comprising public and private sectors, with the mandate to identify, examine and debate issues of regional interest to Mauritius and foster the development of regional co-operation. On highly sensitive negotiations which are extremely important for our national interests, the Ministry of Foreign Affairs and Regional Co-operation pools the resources of various Ministries and, where appropriate, Ministers participate in the negotiations. This on-going national consultative approach is important for added focus on issues that affect our regional initiatives.

We recognise that the economic reform undertaken by the country to achieve sustainable development seeks to internationalise the Mauritian economy through the removal of protection barriers and other domestic market distortions. Micro-economic reforms underscore the importance of efficiency and productive use of our resources which is the basis of sustainable development.

Some major programmes, projects and development that will help Mauritius to achieve sustainable development in the medium and long terms are as follows:

- AGOA (Africa Growth and Opportunity Act);
- New ACP-EU Economic Partnership Agreement;
- Expanding the Economic Space;
- Cyber island Project
- Outward looking Strategy
- AGOA (Africa Growth and Opportunity Act);

Status: The government has set up a public/private sector committee to monitor closely the evolution of our trade with the US. Textile industry is following a vertical integration process in an attempt to obtain maximum benefits of the new US/Africa trade partnership, on a continuous basis.

The private sector has to produce yarn with the help of the government in setting up of integrated cotton yarn and fabric plants in Mauritius.

Programmes and Projects: No information available.

Status: Mauritius has signed a number of trade agreements both at the multilateral and bilateral levels. New opportunities have emerged due to the SADC Trade Protocol and the COMESA Free Trade Area. Specific measures which include:

- the setting up of a Regional Economic Zones Development Fund for regional initiatives in the region
- Boosting up of the country's network of Investment Promotion and Protection Agreements (IPPAs) with countries which are its regional partners, since the measure is intended to construct the confidence of investors.

Capacity-building, Education, Training and Awareness-Raising: By establishing a world-class centre for training in specific fields, be it in environmental investment, in maritime resources or business investment, Mauritius should provide for the training needs of the region and beyond.

Outward-looking strategy: Over the past years, there has been increasing awareness of the need for more organised strategies for ensuring the sustenance of the development process through sound environmental management. Environment and development have become part of different levels of regional and international dialogues. Consequently, there is a need for a coherent national, sub-regional and regional policy instruments for integrating environmental concerns into economic planning and programmes for sustainable development.

The pursuit of sustainable development by Mauritius follows in the continuum of a well-established outward-looking strategy based on the realisation that a small island state cannot progress if it does not open its economy to trade, foreign investment and technology. This strategy underpins the increased interest in regional and international co-operation. Mauritius, founding member of ex-PTA now COMESA, is among the nine "core" countries which have joined the COMESA Free Trade Area (FTA). It has already submitted its Instrument of Implementation of the Amended SADC Trade Protocol which aims at creating a FTA for "substantially all goods" by 2008. At the sub-regional IOC level, tariffs between Madagascar and Mauritius is zero as from mid-March 2000. Mauritius is also a member of the IOR-ARC, which seeks to create an economic platform for co-operation among countries drawing from the African, Gulf and Asian regions.

At the wider international level, Mauritius is participating actively in the discussions on the implementation modalities of the Cotonou Agreement and following closely matters relating to the WTO, of which it is a member.

Mauritius is committed to the achievement of sustainable and equitable development which represents a way or challenge particularly in the African continent where half the countries rank among the least developed and poorest on earth. There is rising concern about whether environmental constraints will limit development and whether development will cause serious environmental problems which will in turn impair the quality of life of present and future generations. A number of environmental problems are already very serious and call for urgent attention at regional and international levels. Since the creation of the Organisation for African Unity forty years back, the founding fathers adopted the 'African Convention for the Conservation of Nature and Natural Resources' which came into force in 1969 and which constituted a trail-blazer for other conventions sectors the Convention on the Protection, Management and Development of the Coastal and Marine Environment of the Eastern African Region - better and other conventions in other regions of Africa.

Africa needs coherent national, sub-regional and regional policy instruments for integrating environmental concerns into economic planning and programmes for sustainable development. SADC is presently in the process of developing an Environment Protocol while COMESA is establishing a Regional Environment Policy to support the growth-process marked by the FTA. At the IOC level, a framework of action has been set up in the field of environment and sustainable management of marine resources.

Mauritius, a small island state with a fragile ecosystem and limited resources, attaches prime importance to the global environmental problems. It is fully conscious of the consequences resulting from the degradation of the environment and its impact on the quality of life of the people and on the economy. The National long term perspective study better known as Vision 2020 states in *"If in 2020 we want a better quality of life overall - as opposed to maximum economic growth alone - then it will be necessary to pay specific attention to environmental issues, to the safety, beauty, practicality, congeniality and sustainability of our physical surroundings. It is thus a matter of obvious importance, not merely to protect our existing physical environment, but also to improve it; not merely to correct environmental damage, but to manage development in such a way that threats are foreseen and avoided, and environmental enhancement is treated as an integral part of general development."* (p.139, Vision 2000, Vol. 1, Ministry of Economic Development and Regional Co-operation)

Mauritius is a signatory to a number of international conventions. The country supports development in international law for the protection and preservation of the global environment. It believes that individual state action in the pursuit of a healthy environment can only work as part of a co-ordinated international plan of implementation. In addition, signing and ratifying conventions is not in itself, a solution and it is more important to find methods of fully abiding by the provisions attached to them. Towards, this end, Mauritius has made some progress in the incorporation of various international conventions in the national legislation. It is worth noting here that the contribution of Mauritius in global environmental impacts is almost insignificant, particularly with regards to climate change and depletion of ozone layer. Nevertheless the country is firmly committed to cooperate with the global community to solve these problems.

The MEAs can be broadly classified under the following subheadings:

- Common Hard MEAs
- Optional Hard MEAs
- Soft MEAs
- Regional Agreements

The common Hard MEAs are

1. UN Framework Convention on Climate Change (UNFCCC 1992)
2. Convention on Biological Diversity 1992
3. Convention on the Protection of the Ozone Layer (Vienna) 1985 and Protocol on substances that deplete the ozone layer (Montreal) 1987
4. Convention on the control of Trans-boundary Movements of Hazardous Wastes and their disposal (BASEL) 1989

The Optional Hard MEAs are

1. Convention of International Trade in Endangered Species of Wild Fauna and Flora (CITES 1973)
2. Convention on wetlands of International Importance especially as Waterfowl Habitat (RAMSAR) 1971
3. UN Convention on the Law of the Sea (UNCLOS) 1982
4. Convention on the prevention of Pollution from ships (1973) as modified by the Protocol of 1978 (MARPOL)

The Soft MEAs are

1. Agenda 21
2. Global Conference for Sustainable Development on small islands states, Barbados (1994)

At regional level, the government of Mauritius is an active member of AMCEN, SADC and is a party of the EAST African Regional Seas Programme. The other agreement is Convention on the Prohibition of International Trade in Waste within Africa (BAMAKO). It is also involved in SIDS network comprising a community of 42 pacific Caribbean, Atlantic, Indian Ocean and African Island nations.

Mauritius is committed to the achievement of sustainable and equitable development which represents a way or challenge particularly in the African continent where half the countries rank among the least developed and poorest on earth. There is rising concern about whether environmental constraints will limit development and whether development will cause serious environmental problems which will in turn impair the quality of life of present and future generations. A number of environmental problems are already very serious and call for urgent attention at regional and international levels.

At the level of regional groupings, we are in favour of the Common Investment Area (CIA) Concept. The objective is to promote the region as a single destination for investment rather than as a series of individual states. Moreover, it implies the opening of a region to cross-border trade and foreign investors, harmonisation of investment regimes, legislation and regulations. Mauritius will bring its contribution in the regional groupings such as IOC, COMESA, SADC & IOR-ARC to attract foreign direct investment in the region. This strategy serves to encourage multinationals and international capital contracts to establish their headquarters in the region.

Foreseeable developments on the international scene such as the harsh biting by the WTO rules on the economies of the African region and the tough negotiations on the Economic Partnership Agreements under the Cotonou

Agreement constitutes development challenges to the regional organisations. Regional co-operation is mandated to monitor activities relating to the following regional organisations to which Mauritius belongs namely Southern African Development Community (SADC), Common Market for Eastern and Southern Africa (COMESA), Indian Ocean Rim Association for Regional Co-operation (IOR-ARC), Indian Ocean Commission (IOC). Mauritius is also involved in the Regional Integration Facilitation Forum (RIFF) which aims at bringing about greater co-operation in trade, investment and payment issues. Moreover it focuses itself on issues relating to bilateral co-operation (e.g. trade and investment missions to Mozambique, Madagascar, Zanzibar, Namibia etc.), grant of Regional Development Certificates and follow-up on continental integration in Africa and on multilateral/international co-operation which have a regional dimension. The Indian Ocean Commission is currently a regional environment programme for sustainable development. The efforts of the IOC, while small given the size of the problem, should be recognised and supported by the African Continent, and in particular, by the different Regional Economic Communities.

Information: Promotion of the country's network of Double Tax Avoidance Agreements (DTAAs) to ease trade and investment between Mauritius and its Treaty partners, by removing double taxation on same income, providing lower rates of tax on certain income flows and providing certainty to businesses regarding their tax liabilities in each country and the provision of Regional Development Certificates which will promote lucrative regional development projects.

Expanding the Economic Space: Along with our desire to expand our economic space and diversify our export market, Mauritius would need to express its determination in regional for it to play a constructive role in promoting regional solidarity, peace, security and world citizenship. This would allow us to be in the race rather than be marginalised by the big players within and outside the regional groupings to which we belong

Research and Technologies: Mauritius has the possibility of transforming itself into a training centre with a view to sharing its expertise with its regional partners and making available services of bankers, accountants, nurses and other services. Government steps its efforts to encourage the exchange of expertise and services at the regional level.

Financing: In our last budget, the biggest contribution went to the education sector most particularly, Information Technology. Government is providing that Committee with all the necessary resources to prepare a full trade agenda to be presented at the first US-Sub Saharan Trade and Economic Co-operation Forum promulgated by the new legislation. To allow large enterprises as well as the SMEs to take advantage of the Africa-specific Generalised System of Preferences the government is providing all the necessary support

Government is providing that Committee with all the necessary resources to prepare a full trade agenda to be presented at the first US-Sub Saharan Trade and Economic Co-operation Forum promulgated by the new legislation.

To allow large enterprises as well as the SMEs to take advantage of the Africa-specific Generalised System of Preferences the government is providing all the necessary support

Cooperation: We are working in close collaboration with India on Information Technology. Necessary actions are being taken at the national level to ensure Internet facilities to all Mauritians.

* * *

**CHAPTER 2: INTERNATIONAL COOPERATION TO ACCELERATE SUSTAINABLE
DEVELOPMENT IN DEVELOPING COUNTRIES AND RELATED DOMESTIC
POLICIES - TRADE**

Decision-Making: No information available.

Programmes and Projects: No information available.

Status: No information available.

Capacity-building, Education, Training and Awareness-Raising: No information available.

Information: No information available.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: No information available.

* * *

CHAPTER 3: COMBATING POVERTY

Decision-Making: The main challenges that are being faced by this Ministry are the ageing issue and the ascendance of exclusion. We are committed to the fight against poverty and the engendering exclusion. Provision and promotion of social welfare are under the responsibility of the Ministry of Social Security, National Solidarity & Senior Citizen Welfare and Reform Institutions. In fact, the implementation of the National Action Plan for Poverty Alleviation will be shouldered by us. In this context, we are adopting a multi-pronged approach. We are moving away from the traditional sphere of welfare provision into new areas in our combat against poverty.

Programmes and Projects: Vulnerable Groups

1. Elderly: Over the past years, a fragmented approach was followed as regards policy for the elderly. However, with the serious challenges posed by ageing, the Government has now adopted a holistic approach as it has realised that the issue of elderly being a cross-sectoral one, it requires a durable strategic partnership involving all the stakeholders.

In furtherance of Governments commitment to Sustainable Human Development towards the creation of an “inclusive society” it has been deemed fit to rethink the traditional approach towards the elderly. Hence, a new approach towards ageing which encompasses proper identification of their needs, formulation of relevant policies and eventual implementation and monitoring has been adopted. In this context, a National Policy on the Elderly has been designed.

The National Policy on Elderly therefore has a developmental and strategic approach to the general issue of the elderly within a holistic framework. It has been elaborated along the human right principles of:

- Ageing with Dignity;
- Productive Ageing;
- Participative Ageing;
- Meaningful Ageing

This National Policy on the Elderly will usher in a new era of social welfare in the midst of the elderly community and this is in-keeping with the commitment of the Government towards the creation of an “inclusive society”. The Recommendations on the National Policy on Ageing are being implemented with the participation of all the stakeholders.

2. Persons with Disabilities: The policy of Government in respect of persons with disabilities is equalization of opportunities in conformity with the United Nations Standard Rules on the Equalisation of Opportunities for Persons with Disabilities. This approach revolves around a multi-pronged policy, which is in tune with the concept of a caring Government. This policy governs:

- *the participation of disabled persons in all fields of activities;*
- *opportunities in the field of education, training and job opportunities;*
- *removal of all barriers to their full participation as citizens; and*
- *a change of attitudes towards the disabled persons.*

The employment of disabled persons is also guided by the ILO Conventions concerning Vocational Rehabilitation and Employment of Disabled Persons.

3. Substance Abusers: The National Agency for the Treatment and Rehabilitation of Substance Abusers (NATReSA) is once again operating under the aegis of the Ministry of Social Security, National Solidarity & Senior Citizen Welfare and Reform Institutions. Its objectives are to:

- coordinate and facilitate efforts at national level towards the implementation programme for the prevention of substance abuse and the treatment and rehabilitation of substance abusers;
- complement existing facilities for:
 - the prevention of substance abuse and;
 - the treatment and rehabilitation of substance abusers.
- Mobilize resources locally and overseas for treatment and rehabilitation of substance abusers;
- Set up and manage institutions for the treatment and rehabilitation of substance abusers;
- Provide aftercare services for the rehabilitation of substance abusers;
- Advise, guide and help voluntary social organizations engaged in the prevention of substance abuse and in the treatment and rehabilitation of substance abusers.

In this respect, NATReSA is funding six Treatment and Rehabilitation Centres in Mauritius and one in Rodrigues. In collaboration with these centres, NATReSA is also carrying out prevention and awareness campaigns in schools, workplace and the community to sensitize children, young people, youths, parents and the public in general on the ill effects of drug use and abuse on the individual, the family, the society and the country. A National Prevention Unit is being set up for this purpose.

A National Detoxification Centre is also being set up to provide medical treatment to severe cases of addiction. Moreover, an Inter-ministerial Committee has been set up under the Chairmanship of the Ministry of Social Security, National Solidarity & Senior Citizen Welfare and Reform Institutions to develop a common and integrated approach to drug demand reduction. The Committee will prepare a strategy document which will serve as a base for the formulation of a National Drug Control Master Plan.

4. NGO / Government Relationships : The Government has always recognized the multifaceted and complex role and importance of NGOs in civil society and therefore in the formulation of national policies. In fact the Government acknowledges the NGOs as viable and legitimate partners in the process of sustainable development especially as far as the comprehensive development of the grassroots is concerned. In this context the Government has established a Non-Governmental Organisation Trust Fund which has the following objectives:

- to consider and approve applications for assistance from NGOs;
- to finance, wholly or partly services and projects of NGOs;
- to ensure an effective use of resources; and
- to rationalize the disbursement of funds to NGOs.

The International Year for Volunteers is also being celebrated this year to give voluntarism its “titre de Noblesse”. This Ministry is disbursing a sum of Rs 1m in this connection.

5. Homeless: Homelessness is a social phenomenon, which has been on the increase. Although not yet reaching alarming proportions in Mauritius, it is still a reality which needs tackling in this period of socio-economic growth.

GOM has been encouraging the initiatives of NGOs in the provision of adequate infrastructure for the benefit of Vagrants, MSSNS, has, jointly with Caritas, launched a Night Shelter Project and is supporting the initiatives of other NGOs in this sector

6. National Solidarity Fund : The National Solidarity Fund, operating under the aegis of Ministry of Social Security, National Solidarity & Senior Citizen Welfare and Reform Institutions provides financial assistance to individuals who have undergone severe personal hardship. Cases which are eligible for assistance are: tragic

accident resulting in loss of life, needy students, victims of natural calamities, repatriation of mortal remains, destitute, patients suffering from incurable diseases, medical treatment not available in Government hospitals, fire victims not covered by the Ministry and assistive devices not provided by the Ministry.

7. Social Welfare : There are 52 Social Welfare Centres throughout the country. The main objectives of these centres are:

- to provide information, educational and recreational facilities to local communities;
- to promote the intellectual, physical, moral and social well being of local inhabitants and the community at large through the organisation of appropriate activities; and
- to promote the spirit of self-help and the culture of caring among the youth, the adults and the elderly.
- Social Welfare Committees, together with other volunteers evolving at the centres are given the opportunity to participate in the decision-making process.

Also, in line with the Policy on Elderly formulated by the Ministry of Social Security, National Solidarity & Senior Citizens Welfare and Reform Institutions, Social Welfare Centres are now offering day care facilities for Senior Citizens in order to enable them to meet their peers and get involved in activities relating to provision of information, education, recreation and leisure. Two such centres are already functional at Grand Bay and Roche Bois.

8. Sugar Industry Labour Welfare Fund: The Sugar Industry Labour Welfare Fund (SILWF) was set up in 1948 with a view to providing facilities to sugar workers. In this context, SILWF runs a number of schemes for the welfare of the workers and their families.

Schemes

(i) Housing Loan Scheme

Provides loan facilities at concessionary rates to workers for the construction/repairs/completion of their houses.

Education

- Scholarships to children of workers for secondary, tertiary and vocational education as well as post-graduate or doctoral studies.
- Interest free loan for the purchase of books and payment of exam fees in respect of children of workers.
- Loans at concessionary rate for purchase of computers.

(ii) Amenities

Provides interest free loans for purchase of household appliances such as Gas/Electric oven, Refrigerator, Washing Machine, and/or autocycle to improve the quality of life of workers and their families. The SILWF has also over the recent years diversified its portfolio of activities and extended some of its activities to cover practically the whole island. For this purpose, SILWF is operating some 120 Community Centres providing more or less the same facilities as Social Welfare Centres

9. ILOIS Welfare Fund: The Ilois Welfare Fund has been established to provide for the social and economic welfare of members of the Ilois Community in Mauritius so as to facilitate their total integration as well as that of their descendants into the island of Mauritius. The fund is providing leisure and recreational facilities through two Community Centres at Pointe aux Sables and Tombeau Bay.

It is also proposed to introduce a scheme whereby financial assistance will be granted to children of Ilois to allow them to pursue higher studies.

Benefits

The following benefits are provided to vulnerable groups:

- free issue of blankets to recipients of Basic Retirement Pension, Basic Invalidity Pension, Social Aid and Widows' Pensions, Basic Orphan Pension;
- free issue of wheelchairs to disabled persons;
- free issue of spectacles to visually impaired persons in receipt of social aid/Basic Pensions (hardship cases);
- free issue of hearing aids;
- cash assistance to fire victims/flood and other natural calamities;
- funding of prosthesis for needy disabled persons;
- book loan scheme to needy students;
- payment of Examination Fees for needy students
- funeral grant in the event of the death of the claimant or of any of his dependents;
- allowance to fishermen

Pensions

Rates per month

(1)	Basic Retirement Pension	
(a)	for a person under the age of 90	1,575
(b)	for a person aged 90 and below 100	6,015
(c)	for a person aged 100 and over	6,825
(d)	For a person who is permanently disabled to the extent of	
	(i) 100 per cent; or	
	(ii) not less than 60 per cent and requires constant personal attendance and who is	
	- under the age 90	1,575 + 1,115
	- aged 90 and below 100	6,015 + 1,115
	- aged 100 and above	6,825 + 1,115
(2)	Widows' basic pension	1,575
(3)	Invalids' basic pension	1,575
(4)	Additional Invalids' basic pension to a person who is disabled and needs the constant care and attention of another person	970
(5)	Child's allowance	
	(a) for a child under the age of 10	515
	(b) for a child aged 10 and over	550
(6)	Orphans' pension	885
(7)	Guardians' allowance	390
(8)	Inmates' allowance (pocket allowance)	265
(9)	Inmates at BSH	395
(10)	Minimum CRP	242

Status:

Capacity-building, Education, Training and Awareness-Raising: With the help of the Lux Development project we are embarking on a massive training programme for our technical staff and that of the charitable institutions. Training programmes in a wide range of issues ranging from project write up to project assessment and evaluation are also being carried out for NGO personnel. To manage the Human Resource Problem of NGOs, a Bank of Volunteers, skill and experience has been set up. A needs assessment of the NGOs is also being carried out. Furthermore, we had adopted a customer-oriented approach towards our clientèle. Instead of them moving towards us, we have adopted a more practical and pragmatic approach through our various institutions by moving

towards the poor. New areas of exclusion are being identified and volunteers are being trained to serve these sectors.

Information: No information available.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: No information available.

* * *

CHAPTER 4: CHANGING CONSUMPTION PATTERNS

Decision-Making:

The Nutrition Unit (N.C.D), and the Ministry of Health (MOH) are responsible for the consumption and production issues. The national priority for Mauritius is the reduction of diet-related chronic diseases. To achieve this, the national policy focuses on promotion of appropriate diets and healthy lifestyles, setting national dietary guidelines, and protection of consumers through improved food quality and safety. Specific national targets include decreasing consumption of oils and fats, raising the consumption of key foods, maintaining the present consumption level of rice, limiting alcohol intake, and enforcement of the Food Act *with the collaboration of the Ministry of Commerce and Co-operatives in exercising control on the importation of products containing a high percentage of saturated fatty acids*. Training facilities for Health care personnel need strengthening.

Programmes and Projects: The Ministry of Commerce and Co-operatives stays as a stakeholder in terms of Import Control, Consumer Protection and Consumer Education for any program and project set up at national level.

Status: The Import Division and the Consumer Protection Unit of the Ministry of Commerce and Co-operatives are collaborating with the Ministry of Health in the enforcement of the provisions of the Food Act.

Capacity-Building, Education, Training and Awareness-Raising: The Consumer Education Unit of the Ministry of Commerce and Co-operatives collaborates with the Ministry of Health on an ad-hoc basis on issues pertaining to Awareness- Raising.

Information: No information available at the Ministry of Commerce and Co-operatives as national program and projects are supposed to be monitored by the Ministry of Health.

Research and Technologies: No information available.

Financing: The health care sector is finance by MOH, United Nations Children's Fund (UNICEF) and World Health Organization (WHO).

Cooperation: No information available.

* * *

CHAPTER 4: CHANGING CONSUMPTION PATTERNS - ENERGY

Decision-Making: No information available.

Programmes and Projects: No information available.

Status: No information available.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: No information available.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: No information available.

* * *

CHAPTER 4: CHANGING CONSUMPTION PATTERNS - TRANSPORT

Decision-Making: No information available.

Programmes and Projects: No information available.

Status: No information available.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: No information available.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: No information available.

* * *

CHAPTER 5: DEMOGRAPHIC DYNAMICS AND SUSTAINABILITY

Decision-Making: The Ministry of Health (MOH) is primarily responsible for population issues, including the implementation of population programmes. The Ministry of Health (MOH) contributed to writing the chapter on population in the National Development Plan. The governments' view on fertility level and population growth is satisfactory. Its population policies aim to maintain the status quo with fertility at replacement level.

Programmes and Projects: We have the ongoing Family Planning Programme at national level. The Family Planning Division of the MOH operates well over 100 family planning clinics on both Mauritius and Rodrigues Island and a number of supply centers for the distribution of contraceptives. These clinics and centers are scattered throughout the country. In addition, remote areas are visited at least once a week by a mobile van.

The programme also includes site supervision, a well-developed routine service statistics system operated by the Evaluation Unit of the MOH, and occasional surveys.

Status: Mauritius is one of the few countries that have achieved its demographic transition in quite a short period of time. The population was about 700,000 in 1962, growing at a rate above 3% per annum, and projected to reach about 2.7 million by the year 2000. However with the implementation of a national family planning programme, the population growth rate has decreased to about 1% per annum at present, and the present population size is about 1.2 million. The average number of children per couple was 6 in 1962 compared to 2 at present. In fact, during the period of 1985-1986, fertility was below the replacement level. However, after 1989, the fertility rate increased slightly, reaching 2.36% in 1992. Since then efforts have been made to bring down and maintain fertility at replacement level.

Capacity-Building, Education, Training and Awareness-Raising: The Government Family Planning Manpower comprises of about 275 staffs of the following grades:

Head Office:	Principal Medical Officer Demographers Statistical Officers
Field Staff (FP)	Supervisors Health I.E.C Officers Community Health Workers Motivators
Field Staff (Maternal & Child Health):	Community Health Nursing Officers Midwives

Apart from the routine Family Planning Programmes of the F.P. division, M.F.P.A. and Action Familiale, other training are also organised for different target groups:

- Students of primary, secondary and tertiary education
- Parents
- Communities / religious groups
- Adolescents
- EPZ workers
- Staff of the Civil Service, hotels etc.

For example to strengthen the Sexual Reproductive Health Programme, the following activities have been implemented:

- Development of curriculum
- Training of Core Trainers
- Training of Trainers
- Development of Information, Educational, Communication (I.E.C) materials
- Opening of Youth Friendly Services

The principal means of communication have been: talks, video shows, advertising, TV/Radio programmes, posters, pamphlets, brochures etc.

Information: The Evaluation Unit of the Ministry of Health & Quality of Life, which is responsible for monitoring and evaluating the national family planning programme, publishes a monthly Bulletin on Reproductive Health Service Statistics and a Family Planning & Demographic Year Book. The last publication (year book of 1999) is also available on the web site (<http://ncb.intnet.mu/moh/yrbk99>).

It gives a detailed description of the age and sex distribution of the population, vital rates, demographic trends and family planning data for the Republic of Mauritius.

Data from Mauritius Family Planning Association and Action Familiale, which are two non-governmental organisations that provide family planning services, are also included in the yearbook.

Sources of family planning/demographic data in the year book are: the Area/Community Health Centres, the Medical Statistics Section and the Central Supplies Division of the Ministry of Health and Quality of Life; and the Central Statistical Office of the Ministry of Economic Development, Productivity and Regional Development.

Research and Technologies: Surveys are carried out at regular periods, some of them are:

1. Fertility change in Mauritius and the impact of Family Planning (1970)
2. Knowledge, Attitudes, Practices (1976)
3. Dropouts among Family Planning Users (1982)
4. Fertility of Women under the Age of 25 years in the Recent Past (1982)
5. Breast Feeding and Infant Health (1983)

Some are carried by the Mauritius Institute Health (M.I.H) and others by the Evaluation Unit of this Ministry, the main beings the Contraceptive Prevalence Survey (C.P.S.) which provides the means to estimate the proportion of all users in private and public sectors, as well as "autonomous" and independent users of natural methods who cannot gives normally be accurately counted. The last one carried out was in 1991.

Nowadays we have different packages (SPSS +, Epi-Info) and we work in a computerised environment.

Financing: The Central Government finances the population programmes and we also receive financial and material support from the UNFPA.

Cooperation: Two NGO's namely Action Familiale and Mauritius Family Planning Association help considerably in carrying out the Family Planning Programme at national level.

We have very often tour visits and participants come from the Continent of Africa and countries of other region.

At the international level we receive financial and material support from the UNFPA for different projects in the implementation of the national Family Planning Programme.

* * *

CHAPTER 6: PROTECTING AND PROMOTING HUMAN HEALTH

Decision-Making: The Ministry of Health and Quality of Life is a major decision-maker regarding protection and promotion of human health in Mauritius. It runs a number of programmes and projects with a view to exercise control on communicable and non-communicable diseases and for the promotion of healthy lifestyle in the Mauritian population. While Mauritius has succeeded to bring under control communicable diseases like diphtheria, typhoid, malaria and tetanus, the last two decades or so have witnessed a rising tide of non-communicable diseases. A national priority is therefore to better control and reduce non-communicable diseases like diabetes, hypertension, coronary heart disease and their related risk factors such as smoking, high consumption of alcohol, faulty diet etc. Legislation relating to smoking and alcohol exist in order to exercise greater control on the sale of these products. Alliance-building with various stakeholders and community participation in health promotion activities are strategies being relentlessly pursued for the betterment of health of the Mauritian population.

Programmes and Projects: Some of the major programmes and unit in the Ministry of Health and Quality of Life that are working towards protecting and promoting human health are:

- The Non-communicable Diseases (NCD) programme; it coordinates all activities aimed at controlling the NDC problem.
- The Health Information, Education and Communication (IEC) Unit; it aims to influence the knowledge, attitude, beliefs and practices of the Mauritian population and bring about desirable health related behavioral changes.
- The National Aids Control Programmes; it coordinates AIDS prevention activities.
- The Health Inspectorate Unit; it carries out activities in order to keep proper control on the introduction of communicable diseases and also to maintain sanitary standards. Activities include, among others, disinfection, disinsectisation, larvaeciding of mosquito breeding grounds, derating, examination of foods and control over places where food is sold.
- The Nutrition Unit; it sensitizes the population on healthy nutrition and lifestyle.
- The Environmental Health Unit; it monitors and controls the quality of water supplied for drinking and domestic purposes, and air, noise and odour pollution to safeguard and promote public health and the environment.
- The Sexual and Reproduction Health Project; it contributes towards the sexual and reproductive health of young people and underserved groups.

A number of other Units also contribute significantly in this sector such as the FP/MCH Unit, the Malaria Unit and the Occupational Health Unit.

Status: The latest NCD survey carried out in 1998 reveals the following:

- 20% of adults aged 30 years and over have diabetes;
- 30% of adults aged 30 years and above have hypertension;
- 40% of adults aged 30 years and above have dyslipidaemia;
- 30% of adults aged 30 years and over are overweight or obese;

- 42% of adults males smoke;
- 16% of males are heavy drinkers.

Measures to strengthen the NCD programme include the setting up of an NCD mobile screening programme. Core teams on NCDs comprising of doctors, nutritionists, health educators, nurses and community health workers are operating at regional levels to carry out primary and secondary prevention activities. Clinical guidelines have been developed for the management of diabetes, hypertension, coronary heart disease and asthma. In the field of health information and education, a comprehensive action plan is being presently implemented and will soon be supplemented by a highly visible mass media campaign on NCDs. Health education is also being viewed in the broader context of health promotion as a result of which a more holistic approach to health is being pursued nowadays.

The latest report on AIDS dated July 2001 indicates that 249 Mauritians are infected with HIV out of which 68 have passed away. The National AIDS Control Programme has developed a National HIV/AIDS Strategic Plan for the period 2001 – 2005. The National AIDS Committee has been revitalized and a multi-sectoral Technical Advisory Inspectorate Unit has served as a catalyst in the review of the food legislation so as to improve food hygiene and safety and ensure that what the public gets in pure, wholesome and safe. Under the Sexual & Reproductive Health Project, a set of training manuals and various other education materials such as posters, stickers, pamphlets, TV and radio spots have been reproduced. Training of trainers and awareness activities with different target groups is being carried out.

Capacity-Building, Education, Training and Awareness-Raising: The Ministry of Health and Quality of Life is highly conscious of the necessity to have trained manpower for the successful implementation of programmes and projects. Training of the health cadres and influential members of the community is given high priority. Little media such as pamphlets, posters, video tapes as well as the mass media are widely utilized in creating awareness on health-related issues in the general public as well as in specific groups. Facilities are offered to officers of the health sector to pursue high studies either at the University of Mauritius or through distance learning in order to upgrade their knowledge and skills. The Mauritius Institute and Health is a major contributor in the continuing education of the health personnel by regularly organizing training and refresher courses.

Information: The Ministry of Health and Quality of Life compiles and disseminates a wide range of health statistics. Some reports are disseminated weekly, some monthly; however, all statistical information is published in a number of Annual Reports, namely:

- (i) “Health Statistics Annual” which contains an analysis of the health situation, a table of selected health variables and indicators, a glossary of health statistical terms and around 70 tables on population and vital statistics, morbidity and mortality, health infrastructure, health manpower, etc.
- (ii) “Return of Work Performed in Hospitals” which contains data on bed occupancy admission, operation, deliveries, death, attendance, tests performed and X-Ray examinations.
- (iii) “The Family Planning & Demographic Yearbook” which contains data on reproductive health services, as well as a population and vital statistics.

Health variables and indicators published in the reports include:

- Population bed ratio
- Population per physician
- Population per nurse
- Percentage of births attended by skilled personnel
- Percentage of live births with low birth weight
- Immunization coverage

- Notifiable diseases, incidence and incidence rate
- Disease-specific death rate
- Bed occupancy
- Fatality ratio
- Family planning methods coverage

Apart from the routine statistics mentioned above, the Ministry of Health and Quality of Life occasionally conducts surveys to obtain certain prevalence rates and other measures of interest. Publications include “Mauritius Contraceptive Prevalence Survey” (1991), “A survey on Nutrition in Mauritius and Rodrigues” (1995), “Mauritius Non-Communicable Disease Survey” (1998) and “Rodrigues NCD Survey” (1999).

Research and Technologies: The dynamic health environment requires adaptation to new and evolving technologies and the carrying out of research in order to have the latest data to guide programmes and projects. For example, the National HIV/AIDS strategic plan 2001 – 2005 provides for a behavioural study and a nation-wide research on the social determinant of HIV/AIDS that will guide national response. With a view to monitor the trend of HIV/AIDS in different groups such as blood donors, pregnant women, commercial sex workers, homosexuals, etc, serological testing is being sustained. Microbiological tests among commercial sex workers and patients with sexually transmitted infections will be carried out. As far as the NCD problem is concerned a number of clinical guidelines have been developed for the management of diabetes, hypertension, asthma and coronary heart disease. These guidelines have helped to establish a standard approach to NCD management among professionals of the public sector. A protocol has also been designed for the evaluation of the NCD programme. The protocol outlines the overall approach in carrying out a formative evaluation that will provide a feedback to those responsible for interventions so that they can improve its design and performance. In the field of NCD prevention again the concept of health promotion is gaining wider recognition as a result of which health education programmes, regulatory activities, community-based work, re-orientation of health services and development of healthy public policies are nowadays high on the agenda of policy-makers.

Financing: The share of the health sector for both recurrent and capital expenditure was 7.2% in financial year 2000. As a ratio to the gross national product (GNP) the expenditure on health was 2.45% over the same period.

Household expenditure on medical and health care has been on the increase during the past few years. The last survey conducted in 1991-92 shows that households spent on an average 192 Mauritian Rupees per month (Mauritian Rupees 2,304 per year) or 3.7% of their total household expenditure on medical and health care, which was 1.2% of GNP at factor cost. Using the family size of 4.3 this means that private household annual expenditure on health in 1991-92 was around 536 Mauritian Rupees per person.

Health care donor agencies include WHO, UNICEF and UNFPA. Some projects financed by the above bodies include implementation of NCD programme, health promotion, HIV/AIDS, maternal child health, reproductive health and nutritional activities. They also provide technical assistance to the health sector.

For some of its major infrastructural development projects, Mauritius borrows loans from international banks such as the African Development Bank from which finance has been sought to upgrade one regional hospital in Mauritius.

Cooperation: At country level, there is intersectoral collaboration among various ministries, local institutions and non-governmental organizations. There is also a long tradition of community participation in health promotion campaigns involving youth, women, elderly and other specific groups.

Mauritius is also a member of the SADC, the Commonwealth Regional Health Community Secretariat and the Indian Ocean Commission. These regional bodies offer opportunities to Mauritius in regional cooperation concerning the health sector.

Bilateral cooperation exists between friendly countries. To site we have the Indo-Mauritius Joint Commission and bilateral agreements with France, Republic of China and Reunion Island.

* * *

CHAPTER 7: PROMOTING SUSTAINABLE HUMAN SETTLEMENT DEVELOPMENT

Decision-Making: Human settlement development encapsulates both shelter as well as the whole gamut of infrastructure services and socio-economic facilities necessary for societal welfare in line with basic environmental norms.

The Ministry of Housing & Lands (MHL) is constitutionally vested with the responsibility for the formulation of strategies and policies in regard to housing and land development at all spatial levels. The MHL acts primarily within the framework of the Town and Country Planning Act, 1954 which, being admittedly outdated, is in the process of being overhauled. The major guiding instrument is the National Physical Development Plan (NPDP) which unfortunately has **no** legal basis. The strategies and policies of the NPDP are operationalised in Outline Schemes prepared under the Town and Country Planning Act and covering the country as a whole.

Pursuant to the provisions of the Building act, the four urban authorities (Municipalities) issue both development and building permits. On the other hand, the four rural authorities (District Councils) grant development permits **only** whilst the issue of building permits falls within the purview of the Ministry of Public Infrastructure, land Transport and Shipping.

According to the Environment Protection Act, which **inter alia** prescribes norms/standards for major forms of pollution control, undertakings (likely to have adverse impacts on the environment) should in the first instance obtain an environmental impact assessment licence from the Ministry of Environment. Likely, the Morcellement Act, which occurs under the MHL, ensures that land parceling projects are adequately provided with infrastructure services prior to the grant of the morcellement permit.

The Central Water Authority and the Central Electricity Board are responsible for potable water and electricity supply respectively. Solid waste collection and disposal is undertaken by the local authorities under the overall control of the Ministry of Local Government. Other socio-economic facilities are provided by the authorities concerned – viz, Ministry of Education, Health, etc.

Both public and private sector investments are in principle carried out within the spatial context of the NPDP.

Programmes and Projects: The National Housing Development Co. Ltd. (NHDC) has been set up by Government for the implementation of a national housing programme mainly in favour of the economically disadvantaged segments of the population. In this connection, mention must also be made of an ambitious sites and services project in the pipeline and targeted towards poor households.

In addition, the Housing Development Certificate Scheme and the New Incentives for Residential Development Scheme have been introduced to encourage the private sector to play a more proactive role in housing and settlement development.

The above initiatives are supplemented by the upgrading of housing estates through the installation therein of a piped sewer network. Similarly, the provision of social facilities (in terms of education, health, recreation/leisure etc.) across the country is being enhanced both in quantitative and qualitative terms.

Status: Government's policy as outlined in the NPDP is to improve the quality of life whilst at the same time providing adequate housing for every household. The country is steadily moving towards this goal as currently more than three-quarters of Mauritian families own their houses.

However, the housing problems of the poor still remain fairly acute. As a result, notwithstanding the sites and services scheme in the pipeline, Government is currently looking into ways and means of improving the overall performance of the NHDC in respect of housing supply.

The country's stock of social capital is being constantly improved and consolidated.

Capacity-Building, Education, Training and Awareness-Raising: Scholarships have been made available by the United Kingdom, Australia and France for training courses mainly at post-graduate level in town and country planning, thereby increasing the number of Town Planners in Mauritius. However, in view of the level of its economic development, Mauritius is no longer eligible for such scholarships. Hence, training in town and country planning abroad needs now to be financed from public funds.

The University of Mauritius, which is running a part time diploma course in town and country planning, has just 'produced' some 40 diplomats. This University envisages to mount a degree course in town and country planning. Government has introduced various incentives to promote continuous professional development in the civil service. The authorities concerned regularly embark on awareness-raising campaigns through TV/radio programmes, posters, etc., to sensitise the population on the various aspects of human settlement development.

Information: Information in respect of the various settlement aspects (including socio-economic indicators) is available at the Central Statistical Office. However, such information is not always updated to the extent that the population census is carried out every 10 years.

A land information system is being set up at the MHL in order to make an inventory initially of State Lands and ultimately of all lands within Mauritius.

Research and Technologies: The Mauritius Research council and the Council of Architects are working on a research project designed to reduce housing construction cost especially for the benefit of the low-income groups.

The MHL in collaboration with the Mauritius Research Council is embarking on a research project in relation to housing demand on the part of the upper middle-income group. The outcome of the research will help the MHL in the formulation of the appropriate policy for coming to grips with the housing problem of the upper middle-income group in Mauritius.

Recently, the National Trust Fund For The Social Integration Of Vulnerable Groups in collaboration with the Ministry of Social Security, National Solidarity or Senior Citizen Welfare and the MHL carried out a survey to assess the housing need of households earning less than Rs 5000 per month. The data from this survey is being analyzed and the result will help the MHL to formulate policies and initiate action, as appropriate.

Financing: Funds for human settlement development are forthcoming mostly from Government sources. Since 1990/91 substantial loans have been obtained from Malaysia and China, by the NHDC for the construction of housing units in favour of low and lower middle-income groups.

Loans for housing construction on private sites are available, generally at concessionary rates of interest, from the Mauritius Housing Co. Ltd., which is financed by the Government and other financial institutions. Commercial banks and insurance companies also provide loans for housing construction- albeit at higher rates of interest.

Cooperation: Mauritius cooperates with mainland Africa, especially with the southern and eastern areas, through meetings and seminars which are often held under the auspices of UNCHS-HABITAT.

In recent years, the Southern Africa Development Community (SADC) has shown keen interest in joint action in the field of human settlements. Mauritius was represented in the preparatory meetings for Habitat II in Uganda (1994) and Johannesburg (1995) and the Habitat II conference itself.

* * *

CHAPTER 8: INTEGRATING ENVIRONMENT AND DEVELOPMENT IN DECISION-MAKING

Decision-Making: Mauritius has an institutional structure, which allows the full integration of environment and developmental issues at all levels of decision-making. The Ministry of Environment cooperates with other national institutions and major groups to protect the environment and promote sustainable development. The National Environment Commission (NEC), chaired by the Prime Minister, is a particularly important coordinating body. It is a means of securing environmental commitments at the highest level of Government. The NEC provides a high level-coordination and policy approval mechanism. It acts as a pivotal body to see that the wishes of Parliament and the Government as a whole are carried out not only by the Department but also by all other government ministries and para-statal organizations.

The Board of Investment established under the Investment Promotion Act 2000 is the latest development-oriented organization which fully takes environmental concerns in the development process. The Town and Country Planning Board also plays an important role in ensuring that environmental concerns are fully integrated in all land use developments.

Many of the decisions affecting the environment are also taken at the local government level. Such decisions are made with the help of outline schemes, the operational plans of the National Physical Development Plan (NPDP).

The NPDP deals with the following:

- (i) protection of agricultural areas;
- (ii) protection of natural heritage, including the terrestrial and marine eco-systems, coastline, islets, and historic areas;
- (iii) siting of all secondary and tertiary activities; and
- (iv) the improvement of the quality of life of Mauritian citizens. Accordingly the NPDP is a major instrument for attaining sustainable development.

The country's awareness and commitment towards the environment and sound development can be traced as far back as 1988, when a World Bank team assisted the government of Mauritius in preparing a National Environment Action Plan (NEAP) to address major environmental issues. In accordance with the institutional legislative recommendations of the NEAP, a full-fledged Ministry for the Environment was created in November 1989, and the Environment Protection Act (EPA) was enacted in 1991. Strategies for environmental management are continually evolving and undergoing improvement.

The seriousness of the government in addressing environmental issues was also reflected in the preparation of a White Paper on the National Environment Policy in July 1990, based on the principles of sustainable development. The national environmental policy for Mauritius states that the guiding principle for environmental management is that:

“As the environment is a collective concern, therefore its protection is a collective challenge which requires a concerted effort through a collective decision-making. Recognizing this inherent principle, the Government shall seek cooperation from industries, interest groups, non-governmental organizations, professionals, citizen groups, cultural associations, and the public at large in environmental planning, assessment, and management while minimizing conflict among various groups over contentious issues.”

Programmes and Projects: Mauritius has well-established environmental programmes in the form of National Environment Action Plans (NEAP). NEAP 1 had 32 projects, most of which have been implemented except for major infrastructural works, such as sewerage, solid waste management, etc, which are ongoing projects.

NEAP1 (1988- 1998) is associated with substantial achievements and the projects were largely successful in establishing a policy, legislative and institutional framework for environmental management. It permitted the creation of the Department of Environment. Several major infrastructural works were also executed. These were complex multi-sectoral projects involving cross-sectoral initiatives and institutional arrangements for implementing the plan

The NEAP 2 has some 72 projects/activities which are geared to promote sustainable development. It was prepared after wide consultation with all the stakeholders and it is being implemented in collaboration with all the Ministries concerned. It presents an environmental strategy and action plan for the period 2000 to 2010. It contains a number of strategic thrusts, some important ones are to:

- control pollution;
- promote clean technology;
- educate people to be environmentally conscious;
- conserve resources;
- protect the local environment;

contribute towards the protection of the global environment.

Status: Neap 1 has been implemented and NEAP 2 is under implementation.

Capacity-Building, Education, Training and Awareness-Raising: Officers of the Department of Environment follow short term training courses on an ad hoc basis. NEAP 2 has recommended that a comprehensive training programme for officers of the DOE be developed.

Environmental Education is incorporated in school curricula and the Department of Environment is actively involved along with many NGOs in informal environmental education. Every year the WED is celebrated with a large public sensitization programme and a whole range of activities where all sectors of the society are encouraged to participate. The DOE also has a website.

Information: The Ministry of Environment has a resource center and a website which is accessible at <http://environment.gov.mu>. An EIS is being developed and many environmental decisions are taken through strategy plans or development plans like the NPDP and the outline schemes

Research and Technologies: The Mauritius Research Council, Mauritius Oceanographic Institute, Mauritius Sugar Industry Research Institute, the Albion Fisheries Research Centre (AFRC) and the University of Mauritius, play important roles in environmental research. But research on pollution is mainly carried out by the national environment laboratory (NEL).

There are also several NGOs actively involved in research, particularly in the domain of biodiversity where Mauritius has made tremendous progress in the conservation of endangered bird species. These NGOs normally work in collaboration with the National Park and Conservation Services.

Financing: Most of the projects and activities of the Ministry of Environment are financed from the national budget. For year 2001 – 2002, the capital budget for the Ministry of Environment is Rs 155 millions and the recurrent budget is Rs 84.4 millions. The National Environment Fund (NEF) funds extra-Ministerial projects, particularly to meet demands from NGOs and other major groups.

Cooperation: Mauritius is active at both regional and international level. It is member of SADC, IOC, IOR and COMESA and has ratified most of the pertinent environmental conventions.

* * *

CHAPTER 9: PROTECTION OF THE ATMOSPHERE

Decision-Making: The Ministry of Environment, Ministry of Health and the National Meteorological Services are responsible for the protection of the atmosphere in the Republic of Mauritius. The National Transport Authority and the Police are the enforcing agencies for the control of vehicle exhaust emission.

The National Climate Committee, under the Prime Minister's Office, is responsible for monitoring of the science of climate change and its adverse impacts on vulnerable sectors of the economy.

Programmes and Projects: The preparation of an Initial National Communication as part of the commitment to the UN Framework Convention on Climate Change (UNFCCC) has been undertaken since October 1997.

A project, on the Economics of Greenhouse Gas Limitation, was carried out with the collaboration of RISO, an institution in Denmark and the report was presented in 1999.

A project, to build up endogenous competence for effective participation in Climate Change Activities, started in 1995 and ended up with the elaboration of a Climate Change Action Plan.

Monitoring of ambient air quality is presently being carried out in the city of Port Louis by the Ministry of Environment and in the short-term; monitoring will be effected at the hotspots where there are complaints due to air pollution. Smoke meters are being purchased to monitor vehicle exhaust emission. Government has decided to introduce Unleaded Petrol (ULP) in Mauritius by August 2002.

Status: The Initial National Communication was submitted to UNFCCC in May 1999.

Government has also approved the Climate Change Action Plan, which described strategies for the implementation of identified adaptive and mitigative measures to curb the emission of green house gases.

The data obtained so far at the ambient air quality monitoring stations indicate that the air pollution is well below the maximum standard limit for all the parameters measured.

Constraints/Challenges

Timeliness in accessing data from various sources was an obstacle.

Creating endogenous capacity-building, out of meagre sources to address climate change issues was very demanding. The strengthening of national institutional arrangement is primordial.

Capacity-Building, Education, Training and Awareness-Raising: Several members of the National Climate Committee were trained to address issues related to Climate Change activities. Local, as well as international, workshops were also organised and attended by officers to enhance capacity-building. Advantages were taken through the US Country Programmes, UNEP/GEF Enabling Activities and Economics of Greenhouse gas Limitations projects.

Some officers of the Ministry of Environment have benefited from short-term courses on air pollution and vehicle emission in some countries like Singapore and Japan. However, there is need for more capacity building.

Awareness-raising was fulfilled through TV/radio programmes, press releases and talks to educational institutions and local communities. Campaigns on distribution of posters, brochures and newsletters were also launched. Open-door events were organised to sensitize the population on the importance to protect the atmosphere. Topics on air pollution are included in the school curriculum.

Information: The following reports are available:

- (1) National Climate Change Action Plan;
- (2) Initial Communication to the UNFCCC;
- (3) Impacts of Climate Change on Agriculture, specifically the sugar industry.

Databases, related to climate change activities, have been created at the Central Statistical Office and National Meteorological Services.

Data from the ambient air quality monitoring stations are directly transmitted, via modem, to the Department of Environment and processed through appropriate software and reports on air pollution are produced.

Research and Technologies: Mauritius embarked on a programme to diversify its energy sources. Private companies were granted permission to establish co-generation power plants to produce electricity from bagasse and coal. The monitoring of ambient air quality and stack emission is new to Mauritius. Research on air pollution generated by industries and vehicle exhaust and their impacts on ambient air quality needs to be carried out.

Financing: Activities related to protection of the atmosphere, were funded partly through the national budget. However, the bulk of the financial support was from projects, funded through the US Country Study Programmes, UNEP/GEF and bilateral agreements.

Equipment for monitoring ambient air quality have been purchased through the national budget.

Cooperation: Regional and International Cooperation was enhanced through the Indian Ocean Commission, Association of Small Islands States and South African Development Community. Guidance and aids from the UN Framework Convention on Climate Change Secretariat, United Nations Environment Programme and World Meteorological Organisation were very valuable. Assistance was obtained from US country studies for the preparation of green house gases inventory and studies on vulnerability and adaptation. The technical assistance of a Japanese expert was obtained for drafting the specifications for the ambient air quality monitoring equipment.

* * *

CHAPTER 10: INTEGRATED APPROACH TO THE PLANNING AND MANAGEMENT OF LAND RESOURCES

Decision-Making: The planning system regulates the development and use of land in the public interest. The system as a whole and the preparation of development plans in particular is the most effective way of reconciling the demand for development and the protection of the environment. Thus it has a key role to play in contributing to the Government's strategy for sustainable development by helping to provide for necessary development in locations, which do not compromise the ability of future generations to meet their needs.

The Government remains fully committed to the plan – led system, given statutory force by the Town and Country Planning Act. However the pace of change – social, technological, economic, environmental and political has never been so fast, nor on such a large scale. Managing the spatial dimension of this change is becoming more complex and requires a new and integrated approach to planning. The new vision for planning should be built around the core ideas of a planning that is

- *Spatial - dealing with the unique needs and characteristics of physical places*
- *Sustainable - looking at the short, medium and long term issues*
- *Integrative - in terms of the knowledge, objectives and actions involved*
- *Inclusive - recognizing the wide range of people involved in planning.*

This broader view of planning is gradually being distilled and adapted to working practice. The Government is soon to commission a review of the National Physical Development Plan (NPDP) which will set the new strategic vision of land use development and policies for the country for the next twenty years.

In the meantime the updating of local plans and policies geared to steer the development of the country into the new economy and provide effective protection of the environment whilst stimulating economic growth is being pursued gradually. This process requires however more funding and institutional capacity. The review and implementation of plans and policies are presently being hindered by lack of adequate human resources both at the professional and sub-professional level in both central and local Authorities. Addressing this shortcoming has become a top Government priority.

Programmes and Projects: Review of the National Physical Development Plan; Review of the Outline Schemes; Low cost Housing Projects

Status: Ongoing

Capacity-Building, Education, Training and Awareness-Raising: There is no provision for future training programme for staff at all levels

Information: Information on planning is kept at the Documentation Centre, Level 6 of Ministry of Housing & Lands, Edith Cavell Street.

Research and Technologies: Planning Department will be provided with e-mail facilities.

Financing: The review of the NPDP is being financed under the second Environmental Investment Programme, EIP2.

Cooperation: The Department of Environment is supervising the implementation of projects under EIP2.

* * *

CHAPTER 11: COMBATING DEFORESTATION

Decision-Making: The Forestry Service is responsible for the management of all state-owned land, within the framework of the National Forest Policy. The Forestry Service is a department of the Ministry of Agriculture, Food Technology and Natural Resources. There is one main legislation for the protection of forests, the Forest and Reserves Act of 1983. The main objectives for the management of forests are the protection of the strategically located upland forests for soil and water conservation, the protection of the rare native flora and fauna, and production of timber, poles and other forest products for local needs. The private sector, NGOs and youth movements are important to sustainable forestry.

Programmes and Projects: The Forestry Service has the following annual targets: production of 1.2 million of forestry and decorative seedlings, re- and afforestation of 200 ha. of state lands, weeding and tending of 700 ha. of young plantations and production of about 15,000 m³ of timber and poles. Mauritius has an annual felling programme for approximately 100 ha.

Status: Once densely covered with indigenous species, the forest cover of Mauritius today amounts to 57,059 ha. of which 34,540 ha. are privately owned. About 1% of the total land area is under native forests. There are about 22,000 ha of state-owned forests out of which 799 and 6574 ha. have been declared Nature Reserves and National Park respectively. There are 12,400 ha of forest plantations, with *Pinus elliottii* as the major species (about 80%). The Pine forests in the central uplands play a major role in soil and water conservation. A limited amount of utility timber (about 8,000m³) is exploited annually. Mauritius being a small island, land is very scarce. The forest plantations are not sufficient to meet the local demand for timber and the furniture and construction industries rely heavily on imported timber. So, most hardwoods are being imported.

Capacity-Building, Education, Training and Awareness-Raising: The senior staff of the Forestry Service consists of four university-trained professionals. There are 126 forestry technicians and a supervisory and labour force of about 1,300 persons. There is a shortage of technical staff at all levels. Over the years, the labour force has been reduced and the Forestry Service is gradually resorting to mechanisation, especially for land preparation prior to reforestation.

Information: Information on forest resource base (native, planted forest, islets, mountains etc) are kept at the Records Unit. The Tree Seed Centre and Biodiversity Unit are undertaking research programmes on endangered native species and forest exploitation. Computerization of information and a database have been set up.

Research and Technologies: No information available.

Financing: The Forestry Service is totally funded by Government.

Cooperation: Besides the long tradition of commitment and participation in international movements for ecological conservation, the Forestry Service has working links with international forestry institutions/organisations. On a regional level, the SADC has helped to establish a Tree Seed Centre with in-service training, and provided partial funding for training of Forest Officers at the University of Mauritius for achieving a Certificate in Forestry.

* * *

CHAPTER 12: MANAGING FRAGILE ECOSYSTEMS: COMBATING DESERTIFICATION AND DROUGHT

Decision-Making: Mauritius is not affected by desertification, but often suffered drought conditions particularly in the northern and western parts of the island.

Drought conditions are monitored by the Ministry of Agriculture, Food Technology and Natural Resources, the Ministry of Public Utilities (Central Water Authority) and the Ministry of Environment. Guidance is provided by the Meteorological Services.

Programmes and Projects: Constant monitoring of levels of all water resource systems
Efficient irrigation methods (using less water) such as drip irrigation are being used; and
Increase water storage capacities: a new dam (Midlands Dam) is being constructed.

Status: Mauritius ratified the International Convention to Combat drought and Desertification on 11 January 1996.

Capacity-Building, Education, Training and Awareness-Raising: Some training events, especially on management of drought, have been attended by officers of concerned ministries and institutions;
Advisories are issued through print and broadcast media. Posters, pamphlets and brochures are also distributed to the population.

Information: Regions suffering from drought conditions in Mauritius have been identified namely the northern and western sectors and coastal strips.

Research and Technologies: Basic studies have been carried out.

Financing: Mainly local and few international funding.

Cooperation: Mauritius is working very closely with SADC countries.

* * *

CHAPTER 13: MANAGING FRAGILE ECOSYSTEMS: SUSTAINABLE MOUNTAIN DEVELOPMENT

Decision-Making: Mountains are State owned as well as privately owned and have legal protection under the Forests and Reserves Act 1993.

Outline Schemes which are local plans contain policies on protection of listed forest and mountain areas. Similarly, guidelines on development in steep or mountain slopes are also being incorporated in these schemes to provide a framework for development control to all planning authorities.

Programmes and Projects: The Forestry Service has the following projects:

- To re-afforest 20 ha on Port-Louis Hills (Signal Mountain) behind Marie Reine de La Paix.
- Rehabilitation and management of Le Pouce Nature Reserves; and
- Restoration and management of State Land Morne Brabant forming part of Mountain Reserves.

The Ministry of Housing and Lands is proposing to put in place robust Guidelines in respect of development on mountain slopes. The MRC is also proposing a research project on development on mountain slopes.

Status: Mountain Reserves occupy the upper slopes of mountains that are mostly rocky and bare but some areas are covered with forest thickets of mostly exotic plants. Certain mountainous areas are being used for deer ranching activities. The mountain reserves constitute of 3,800 ha. in Mauritius.

Capacity-Building, Education, Training and Awareness-Raising: The senior staff of the Forestry Service consists of four university trained professionals. There are 126 forestry technicians who have received forestry training at the University of Mauritius and a supervisory and labour force of about 1,300 persons. There is a shortage of staff at all levels. Over the years, the labour force has receded and the Forestry Service is gradually resorting to mechanization, especially for land preparation prior to reforestation.

- (i) Regularly conservation education is imparted in schools through slide presentation, exhibitions, talks and guided tours.
- (ii) The Forestry Service in collaboration with the Mauritius College of the Air is presently preparing 13 mini-films on 13 themes in the context of the International year of Mountain 2002.

Information: Information on forest resource base (native and planted forest, islets, mountains etc...) are kept at Records Unit. Computerization of information and a data has been set up to make information accessible to the general public. If the proposed MRC project is approved, a multi-sectoral appraisal of the impact of development on steep slopes will be available in order to safeguard sustainability.

Research and Technologies: No information available.

Financing: The Forestry Service is funded by the Government.

Cooperation: Mauritius has a long tradition of commitment and participation in international cooperation for ecological conservation amongst others. It has solid working links with such agencies as the United Nation Environment Programme, the International Union for Conservation of Nature Resources, the Worldwide Fund for Nature (WWF), the Jersey Wildlife Preservation Trust and others. The SADC has contributed to establish a Tree

Seed Centre along with training in the field of seed technology and Tree Seed Centre along with training in the field of seed technology and Tree Seed Centre management and also provided partial funding for the training of Forest Officers to a certificate in Forestry at the University of Mauritius.

* * *

CHAPTER 14: PROMOTING SUSTAINABLE AGRICULTURE AND RURAL DEVELOPMENT

Decision-Making: The judicious sustainable utilization of natural resources for food production, aiming at maintaining the sustainability of the agricultural sector is a key priority for the Government. The promotion of sustainable agriculture and rural development is being implemented through specific Government projects and supported by two major Acts, the Sugar Industry Efficiency Act and the Town and Country Planning Act.

Programmes and Projects: The Mauritius Sugar Industry Research Institute (MSIRI) is the lead organization for research into sugarcane plantation. A Resource Management Division is responsible for research and development programme at Agricultural Research and Extension Unit (AREU) with the aim of developing management practices that will ensure optimal utilization of resources for agricultural production. The main objective of AREU is to serve the farming community of the non-sugar sector through excellence in cost-effective high quality research and extension. Major thrust areas include: optimal land and water use, organic waste recycling, organic agriculture, integrated pest management and integrated plant nutrient management systems.

Status: There is a major pressure for the removal of agriculture from land in view of the vast monetary gains to be obtained from land development. Major supportive control is effected through the Land Conversion Committee or the Ministry of Agriculture and through Outline Schemes produced under the Town and Country Planning Act. There are also major projects aimed at combating soil erosion and degradation in Rodrigues. The National Development Unit of the Ministry of Local Government, Rodrigues and Rural & Urban Development is given the responsibility of providing infrastructure in the rural areas, in addition to other Government Ministries and the Local Authorities.

Capacity-Building, Education, Training and Awareness-Raising: MSIRI is one of the lead agricultural research stations in the world. Training is mainly through ad hoc programmes, for officers involved in the various areas of sustainable agriculture. Some training will be provided under projects that are financially supported by foreign institutions like the International Atomic Energy Agency (IAEA).

Information: The Information Unit of the Extension Department of AREU caters for all information and queries required by the farming community and the public at large. This also a Statistical Unit where most of the databases on crop production are available. Information is disseminated through leaflets and recommendation sheets in addition to radio and TV programmes.

Research and Technologies: MSIRI is the lead research organization for research into sugarcane. Various projects related to the development of sustainable agricultural systems are currently being undertaken. With the collaboration of the International Atomic Energy Agency (IAEA), AREU is developing integrated plant nutrient system for major cropping system in order to limit leaching of agro chemicals, while at the same time to study the fate of nitrate in the soil/ plant/ water system under intensive vegetable production. Improvement in the vegetable legumes/ Rhizobium symbiosis is also being studied with a view to diminish fertilizer N input in crop production. Emphasis is being laid on organic farming. To this end, crops that could be produced organically are being tested and the techniques of organic production system are being evaluated. Another project undertaken in line with sustainable agriculture is the use of leguminous cover crops for soil, water and fertility conservation. Waste recycling is also being given much attention as organic waste can help cut down on inorganic fertilizer input.

Financing: Funding is mainly provided by the Government. However, some research projects are funded by local institutions such as the Mauritius Research Council (MRC) and the Food and Agricultural Research Council (FARC). The IAEA is funding a project to study the fate of nitrate under intensive vegetable production system.

Cooperation: The IAEA co-operates in funding and providing technical assistance and training in a project that require nuclear techniques to study the soil - plant relationship and the fate of nitrate in soil, water and plant. Through the Centre de Cooperation Internationale en Recherche Agronomic pour le Developpement (CIRAD), the islands of the Indian Ocean, namely Mauritius, Madagascar, Reunion and Mayotte share information and experience on agrobiological management of soil and cropping system.

* * *

CHAPTER 15: CONSERVATION OF BIOLOGICAL DIVERSITY

Decision-Making: The National Parks and Conservation Service (NPCS) of the Ministry of Agriculture, Food Technology and Natural Resources (MAFTNR) is one of the leading agencies responsible for the conservation and management of terrestrial endemic biodiversity resources in Mauritius. Other sectors of biodiversity resources such as agricultural biodiversity, biotechnology, aquatic biodiversity are being dealt by competent departments/ministries such as Agricultural Services and Ministry of Fisheries with the Ministry of Environment acting as the focal Ministry, which coordinates activities in relation to implementation of provisions and articles under the Convention on Biological Diversity.

Various committees and advisory bodies have been set up under the aegis of leading ministries/departments with regard to Decision-Making. The committees are fully participatory involving non-governmental organizations (NGOs), academia, research institutions, various public and private organisations.

The Wildlife and National Parks Act (1993) and subsequent regulations, the Forests and Reserves Act (1983), the Fisheries and Marine Resources Act (1998) and the Environment Protection Act (1991) are the main pieces of legislation governing conservation, protection, management, and sustainable use of biological resources in the Republic of Mauritius.

Programmes and Projects: Various national programmes for the conservation and sustainable use of biodiversity have been completed while others are underway. Two protected areas have been proclaimed by law. In 1994, Black River Georges (6,574 ha.) was proclaimed as the first national park for Mauritius. This park is the refuge for most threatened endemic fauna and flora. A wetland reserve was declared in 1999 for migratory birds and has been proposed as a RAMSAR site. Various projects for the restoration of degraded forests are underway. These include the creation and management of nine Conservation Management Areas (44 ha.) to control alien invasive plants and animals thus helping in the regeneration of endemic plants and reproduction of endangered endemic birds.

Numerous programmes are also being implemented jointly with the Mauritian Wildlife Foundation, a very active NGO, in collaboration with various international agencies. Implementation of various programmes regarding conservation and management of biodiversity resources, in particular, terrestrial biodiversity, have developed an exemplary synergy amongst all partners involved.

Captive breeding and release in the wild of endemic threatened birds have enabled at least three species (Mauritius Kestrel, Pink Pigeon and Echo parakeet) to be saved from extinction, while works are underway for other threatened species, such as songbirds, as well as mammals (fruit bats) and reptiles both on the mainland and offshore islets.

In-situ and ex-situ activities are being actively pursued to save the endangered flora including non-charismatic species such as ferns. Some of the species are eventually re introduced in the managed forests as well as on offshore islets. A fully equipped plant propagation facility for ex-situ conservation has been set up by NPCS. One hundred and twenty (120) of the 300 species of rare endemic plants have been propagated.

Restoration of degraded offshore islets constitutes another major conservation activity. This includes eradication of problem animals, research on the biology and habitat of native birds and reptiles in view of their conservation and future translocation onto other rat free islets. As part of the National Biodiversity Strategy and Action Plan, a terrestrial biodiversity programme has been developed in consultation with all partners for the coming five years.

Status: As conservation and restoration programmes are designed for long terms, many of the above-referred programmes are ongoing while new programmes are awaiting funding to be secured.

Capacity-Building, Education, Training and Awareness-Raising: Various training programmes hosted by international organisations and dealing with conservation, plant genetic resources, environmental education, captive breeding and parks management amongst others have been attended by numerous Field Officers, technical and scientific cadre of the NPCS. At the local level, numerous sensitisation and education activities have been organized at secondary schools, communities, radio and TV programmes. International events such as Biodiversity Day, Environment Day and Wetlands Day are celebrated through activities such as national exhibitions, launching of posters and talks.

Information: Database on the status of flora and fauna is available at the NPCS and this is presently being updated under a “Darwin Initiative Programme”.

Research and Technologies: Various research programmes with respect to control of invasive species, propagation of endangered species and restoration techniques have been effected in collaboration with NGOs, international organisations and University of Mauritius, while new ones such as use of a complete exclusion fence (super fence) to exclude all kinds of pests are underway.

Financing: The programmes and projects have been financially supported through grants as well as loans from international funding agencies such as GEF, World Bank, Darwin Initiatives, Overseas Development Administration (UK), UNEP, UNDP, SADC and others. At the local level, funding is mainly through government support and legally established funds such as the National Environment Fund, the Wildlife and National Parks Conservation Fund and private sectors donations.

Cooperation: In recognition of its unique biodiversity and the challenges that face it, Mauritius was the first country in the world to ratify the Convention on Biological Diversity (CBD) in 1992. The Ministry of Environment has been designated as the focal point for this convention and the NPCS of the MAFTNR as the focal point for the Subsidiary Body on Technical and Technological Advice and the national Executing Agency for the preparation of the National Biodiversity Strategy and Action Plan and the first National Report.

The Government of Mauritius is also signatory to a number of international conventions relating to conservation and sustainable utilization of genetic resources. These include:

1. Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), 1973;
2. African Convention for the Protection of Nature and Natural Resources, 1968;
3. Convention for the Regulation of Whaling, 1946;
4. Convention on Wetlands of International Importance Especially as Waterfowl Habitat (RAMSAR), 1971;
5. Convention on Fishing and Conservation of Living Resources of the High Seas, 1958;
6. Convention for the Protection of the World Cultural and Natural Heritage, 1972 and
7. UN Convention on the Law of the Sea (UNCLOS), 1982.

The Government of Mauritius is also envisaging to sign the International Biosafety Protocol as called for under Article 19 of CBD which has been opened for signature since 5th June 2000 and has ratified the African Eurasian Waterbird Agreement.

The Government is also member/ party/ signatory to the following organisations/ committees/ commissions:

1. FAO and Commission on Plant Genetic Resources;
2. Inter-African Phytosanitary Council of the Scientific and Technical Commission of the OAU;
3. Committee for Agricultural Collaboration of the Mascarene islands;
4. IUCN Agreement of the World Conservation Union, and

The Government also has strong ties with a host of international organisations like the:

- Durrell Wildlife Conservation Trust (UK);
- World Centre for Bird of Prey, Peregrine Fund (USA);
- World Wide Fund for Nature (WWF);
- Royal Botanic Gardens, Kew (UK);
- Royal Botanic Gardens, Edinburgh (UK);
- Flora and Fauna International;
- World Conservation Union (IUCN), and
- International Council for Bird Preservation (ICBP).

* * *

CHAPTERS 16 AND 34: ENVIRONMENTALLY SOUND MANAGEMENT OF BIOTECHNOLOGY AND TRANSFER OF ENVIRONMENTALLY SOUND TECHNOLOGY, COOPERATION AND CAPACITY-BUILDING

Decision-Making:

Technologies: Technology Transfer in Mauritius is intrinsically linked with the structure of the economy. There are several institutions that have been set up to cater for the acquisition, transfer and adaptation of technology in Mauritius. Among the institutions that have been set up to cater for the promotion of technology are:

- Mauritius Research Council (MRC)
- Food and Agricultural Research Council (FARC)
- Technology Development Project (TDP)

And Information Technology Institutions such as:

- National Computer Board (NCB)
- Central Informatics Bureau (CIB)
- State Informatics Ltd (SIL)
- University of Mauritius
- University of Technology

The Information and Communication Technology (ICT) is poised to emerge as a viable sector. In this context, Government has taken the decision to develop a cybercity which will offer state-of-the art infrastructures and recreational facilities for the development of the Information Technology (IT) industry. Furthermore, the copyright bill including the protection of Information Technology (IT) has already been enacted.

The Mauritius Accreditation Service (MAURITAS) has been set up within the Ministry of Industry, Commerce and International Trade so as to provide a unified service for the accreditation of organizations performing calibration, testing, sampling or inspection of laboratories and conformity assessment bodies.

Furthermore, the Ministry of industry, Commerce and International Trade has set up two schemes namely: Indian Technology Diffusion Scheme (ITDS) with Indian fund and the Technology Improvement Scheme (TIS) with the help of ACP-EU. These schemes are geared towards the improvement of technology at firm level, productivity improvement and training of staff.

On the other hand, the MRC has been financing a series of studies which aims at improving and adapting technology to the Mauritian context.

The Department of Environment also acts as a liaison with other organization dealing with environmental issues. The Environment Investment programme (EIP) provides most of the infrastructure to help implement sustainable development. The transfer of environmentally sound technology is being done through information retrieval. Before proceeding with its acquisition, information is requested by potential importers. New environmental laws are being created, old ones are being updated, and new institutional support such as the Department of Environment, specialized laboratories and fiscal incentives regarding the modernization of equipment, have been granted. ISO 14000 is a must for Mauritian products to get the Eco-labeling so as to overcome the technical barriers imposed by the European and USA markets.

Biotechnologies: The Food and Agricultural Research Council (FARC) has produced a strategy paper on the use of biotechnology in the agricultural sector in line with environmentally sound practices. A feasibility study is being carried out on the setting up of a National Food and Biotechnology Institute under the aegis of the Ministry of Agriculture, Food Technology and Natural Resources.

The National Agricultural Biotechnology Advisory Committee (NABAC) was set up to inquire on the use of biotechnology in agriculture and the environment. NABAC is responsible to the Ministry of Agriculture through the Food and Agricultural Research Council (FARC). The terms of reference of NABAC define as priority areas, information/technology access, regulatory matters, intellectual property management, human resources

development and financial investments management. Four consortia were also commissioned to address four national priority themes namely, Consortium I (under chairmanship of FARC) for the availability of elite disease-free planting material, Consortium II (under chairmanship of Agricultural Services) for livestock aquaculture improvement, Consortium III (under chairmanship of University of Mauritius) for sugar cane products, utilization and environment quality, and Consortium IV (under MSIRI) for sugar cane improvement.

It must also be admitted that at national level, there do exist problems concerning the sourcing, acquisition, adaptation and transfer of technology especially at firm level. In this context, the setting up of a National Centre for Cleaner Technology would be most welcomed. This center would give advice to enterprises on existing technologies.

Programmes and Projects:

Technologies: To face the new challenges arising out of trade liberalization and globalisation, Mauritius is putting emphasis on programmes to enhance the international competitiveness of our firms. Technology plays a vital role in the development of industries. Under Indian Technology Diffusion Scheme (ITDS), 29 enterprises have already benefited from grants for productivity and quality improvement, technology transfer and consultancy.

300 enterprises (250 from the EPZ sector and so from non-EPZ sector) have benefited from the Technology Diffusion Scheme (TDS).

The Clothing and Technology Centre has set up a small factory, whereby workers from the textile sector are trained and made aware of the latest development taking place in this sector.

The Mauritius Research Council commissioned a feasibility study of OTEC (Ocean Thermal Energy Conversion) in Mauritius in January 2001. The study was carried out by a team of scientists from the National Institute of Ocean Technology (NIOT) from Chennai, India. This technology provides both electrical power and desalinated water by using the temperature difference that exists between the warm surface seawater and the cold deep water.

Biotechnologies: FARC, through its biotechnology laboratory and hardening facilities, is encouraging the use of tissue culture plantlets in the production several crops with view to promote an environmentally sound agriculture with a reduction of pesticides use. Crops targeted are bananas, ginger and anthurium in the first instance.

Status:

Technologies: A new project is in the pipeline which is geared towards the 'enhancement of the competitiveness of Small and Medium enterprises' (SMES). This will be financed by European Union (EU).

Biotechnologies: The focus of biotechnology has been mainly on micro propagation of disease-free plantlets.

Capacity-Building, Education, Training and Awareness-Raising:

Technologies: No information available.

Biotechnologies: The University of Mauritius is running courses for capacity building in the field of biotechnology.

Information:

Technologies: It is desirable that a National Cleaner Production Centre be set up so as to cater for technology transfer in the country. Through seminars and surveys the Ministry of Industry, Commerce and International Trade has been trying to ventilate the benefits of the different technology improvement schemes that are run by this Ministry.

Association of industrialists such as Mauritius Export Processing Zone Authority (MEPZA) are already raising awareness of quality issues among the business community.

Biotechnologies: No information available.

Research and Technologies:

Technologies: Various research organizations such as MSIRI, University of Mauritius, Mauritius Research Council (MRC) are implementing programmes for the development and adaptation of technologies in the country.

Biotechnologies: Research programmes in the field of biotechnology are being implemented by different institutions namely the Mauritius Sugar Industry Research Institute, University of Mauritius and the Agricultural Research and Extension Unit.

Financing:

Technologies: Technology Diffusion Scheme (TDS) was financed by a loan from World Bank. “Competitiveness enhancement of Small and Medium Enterprises (SME’s)” will be financed by the European Union. Indian Technology Diffusion Scheme (ITDS) is financed by grant from India.

Biotechnologies: Research projects in the field of biotechnology are being financed by FARC and the Mauritius Research Council through Government funding and also access money from sale of sugar.

Cooperation:

Technologies: Regional Co-operation in environmental technology exists but on a very limited scale. Mauritius is well informed on all developments taking place in the international forum for environmental protection. United Nations Environment Programme (UNEP) is the international organization which provides Mauritius with information on all environmental issues.

Biotechnologies: Local institutions cooperate to implement some projects and they also form part of international networks.

* * *

CHAPTER 17: PROTECTION OF THE OCEANS, ALL KINDS OF SEAS, INCLUDING ENCLOSED AND SEMI-ENCLOSED SEAS, AND COASTAL AREAS AND THE PROTECTION, RATIONAL USE AND DEVELOPMENT OF THEIR LIVING RESOURCES

Decision-Making: Various ministries and national organisations such as the Ministry of Fisheries, Ministry of Environment, Ministry of Tourism, Ministry of Housing and Lands, Ministry of Local Government and Rodrigues, Meteorological Services, Mauritius Ports Authority, University of Mauritius and Mauritius Oceanography Institute are involved, albeit to a varying degree, on ocean and coastal - related issues.

Legislations and regulations on the marine environment are dispersed across several acts and laws such as the Environmental Protection Act (1991), the Fisheries Act, the Continental Shelf Act and the Sand Extraction Act (2001). Mauritius is also party to several conventions such as the United Nations Convention on the Law of the Sea (UNCLOS) 1982, the Convention on the Continental Shelf, the Convention on Fishing and Conservation of Living resources of the High Seas 1958, Convention for the Regulation of Whaling 1996, the Convention on the Prevention of Pollution from ships as 1973(MARPOL), Convention on Civil Liability for Oil Pollution Damage (CLC) 1969, Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (FUND) 1971 and Convention on the High Seas.

Programmes and Projects: A wave-rider buoy was deployed off the southeast coast of Mauritius in 1996 to obtain some coastal observations. A routine and systematic monitoring of basic -parameters of lagoon water quality at several sites around the island has been initiated. Current measurements and bathymetric charting in the lagoons have been undertaken in some regions. Sea-level variation and changes continue to be monitored in Mauritius and Rodrigues. A National Oceanographic Data Centre (NODC) has been established to develop and maintain an ocean database. Protection measures with the installation of gabions at critical sites have been taken to mitigate coastal erosion. A replantation mangrove programme has been implemented at several sites in Mauritius and Rodrigues. A coral reef monitoring programme is ongoing within the framework of the Global Coral Reef Monitoring Network (GCRMN). Two marine parks have been proclaimed by the President and their development are now well advanced. Sewage projects at several coastal sites are being implemented for proper sewage disposal to minimize coastal contaminations.

Mauritius is participating actively in the meteorological component and other aspects of the IMO Safety of life at Sea (SOLAS) convention. Mauritius is taking the lead in the development of the WMO/IOC (UNESCO) Western Indian Ocean Marine Application Project (WIOMAP) which will be a regional contribution to the Global Ocean Observation System (GOOS). An ICZM programme is being planned with overseas expertise technical support. The implementation of the National Sewage Master Plan and National physical Development Plan will reduce pressure on the coastal zone. A National Oil Spill Contingency Plan and a Port Louis Oil Contingency Plan are regularly being updated. For any coastal development, Environmental Impact Assessment (EIA) reports have to be submitted to the Ministry of Environment.

Status: The coastal zone, the most available asset of Mauritius is under intense human and environmental pressure mainly from land-based activities and, to a less extent, from sea-based activities. There has been an acceleration of beach erosion and growing degradation of the lagoon water quality. Protection measures such as gabion to mitigate coastal erosion have proved successful at only a limited number of sites.

Capacity-Building, Education, Training and Awareness-Raising: Several scientists have benefited from formal and ad hoc training courses in overseas institutions organised and sponsored by various United Nations International Agencies. Scholarships have been awarded by WMO, UNEP, FAO and UNDP for post-graduate studies and upgrading of academic and professional qualification.

Oceanographic equipment has been acquired under various Regional and International programmes mainly the Global Sea Level Observation System (GLOSS), Canadian International Development Agency (CIDA) and Japanese International Cooperative Agency (JICA). Transfer of knowledge and Technology have been enhanced with the visit and posting of overseas experts in various organisations/institutions.

The University of Mauritius offers a first-degree course in Environmental Sciences which includes some modules on marine sciences. A few topics related to the ocean (coral reefs, oceans of the world) are included in the primary school curriculum.

Posters and brochures on “Save the ocean” and the NODC have been prepared and widely distributed.

Talks, TV and radio presentation and public debates are organised at regular intervals with the participation, at times, of the Minister concerned.

Constraints/Challenges: Constraint: Lack of human resources and appropriate equipment.

Challenge: To plan and implement a long-term and routine coastal systematic observation.

Information: A habitat classification of the near-shore waters around Mauritius showing corals, green algae and sea grasses, surfs sand, sand, black rock has been prepared using the Compact Airborne Spectrographic Imager (CASI) mapping systems for coastal development and management. A National Environmental Action Plan (NEAP-II) which includes section on Coastal Zone has been formulated and is in the process of implementation.

- A climate change Action Plan and Initial Communication with much emphasis on the impacts of Global Warming and sea-level rise on coastal resources have been submitted to the United Framework Convention on climate change (UNFCCC).
- Vision 2020, a report which makes projection on a development programme up to the year 2020, includes a scenario for the coastal zone.

Research and Technologies: Research activities on impacts of global warming are being undertaken.

Several research activities on fisheries and marine pollution are underway. For the purpose, several databases including the Regional Tuna database, the bank fishing database and the marine ecosystem and coastal pollution database are accessible to National Institutions.

Modern Technologies using IT are being used to analyse data and prepare products.

Financing: Many activities in the coastal zones such as cleaning of the beaches and installation of gabions are financed from national budget.

Some hotels also contribute in the rehabilitation and upgrading of some beaches.

International organisations such as UNDP, IOC (UNESCO), WMO and UNEP have funded many coastal projects. Regional organisations such as IOC and SADC and some countries such as Japan (JICA) and Canada (CIDA) under bilateral agreements have funded several marine projects have provided funding for several marine projects.

Cooperation: At national level, co-ordination is promoted through committees and meetings.

Many regional and international organisations of the United Nations are involved in assistance programme on several marine issues.

Friendly countries under bilateral agreement have contributed much in the field of transfer of technology and knowledge through cooperative programmes.

Tuna Fisheries activities are co-ordinated within the framework of the Indian Tuna Commission (IOTC) and the Western Indian Ocean Tuna Organisation (WIOTO).

* * *

CHAPTER 18: PROTECTION OF THE QUALITY AND SUPPLY OF FRESHWATER RESOURCES: APPLICATION OF INTEGRATED APPROACHES TO THE DEVELOPMENT, MANAGEMENT AND USE OF WATER RESOURCES

Decision-Making: The Ministry of Public Utilities is the parent body for the management of water resources. This power has been delegated to the Water Resources Unit, which is responsible for the assessment, management, development and conservation of water resources. There are three subsidiary bodies for managing the available water: the Central Water Authority, responsible for potable water distribution, the Irrigation Authority, responsible for irrigation purposes and the Waste Water Authority, responsible for managing wastewater.

Programmes and Projects: The Water Resources Unit has worked out an integral plan for harnessing additional water resources to meet the water requirements of the various sectors of the economy up to the year 2040. These comprise development of ground water, construction of run-of-river diversion schemes and a number of storage dams. As a first step, the construction of Midlands dam has started in January 2000 and is expected to be completed by December 2002.

Status: Present annual water utilisation is of the order of 985 Mm³ equivalent to about 25% of average annual rainfall over the island. About 840 Mm³ are from surface water and the remaining 145 Mm³ from groundwater, which accounts for 57% of municipal water supply (domestic, industrial, tourism).

Water is mainly used for the following purposes:

- Domestic, industrial and commercial (~ 20%)
- Industrial (private boreholes) (~1%)
- Agricultural (~48%)
- Hydropower (~31%)

99.8% of the population has access to safe water. Due to an increase in water requirements by industries and tourists, an integrated draft plan has been prepared for harnessing additional water resources to meet the water requirement of different sectors of the economy up to the year 2040. The projections for potable water requirement assume a population of 1.6 million and a per capita consumption 250 litres/day in 2040. At present, the population is 1.2 million and the per capita consumption is 190 litres/day.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Constraints and challenges

Constraints

- Unavailability of funds to reduce unaccounted for water and upgrade the network
- Lack of expertise in defining the maximum permissible limits for pollutants
- The high cost for treatment of effluent
- Optimum permissible limits for pollutants have to be worked out to ensure that Mauritius can afford to preserve its environment whilst ensuring that the various manufacturing sectors remain competitive.

Challenges

- To increase awareness for the general public on the necessity to conserve water and to preserve its quality
- The creation of adequate carry-over water storage to cope with unusually longer dry spells

Information: The fresh water supply of Mauritius consists of 92 rivers, 10 man-made lakes, 2 natural lakes, and ground water distributed into seven ground water basins. The mean annual rainfall varies from 750 millimeters on the coast to 4200 millimeters on the Central Plateau. Surface water is diverted into 25 major basins and 22 minor ones and is utilized for domestic and industrial purposes and to service the heavy irrigation needs of the sugar cane

plantations. A number of wells, from 5 main aquifers, have been drilled, mostly for irrigation and domestic use. In order to increase the water availability, research has been conducted and deeper-than-usual boreholes have been drilled.

The following legislations regulate the water sector:

- Rivers and Canal Act (1863) provides for management of rivers and canal as well as for protection of river water against pollution.
- CWA Act (1971) provides for the creation of the authority and its duties and powers regarding supply of potable water for different purposes and water resources development, management and conservation.
- Groundwater Act (1970) provides for management of the aquifers.
- Environment Protection Act (1991) provides for protection of water resources (standards for water).

Research and Technologies: The issues of water quality are closely tied up with the management of the coastal zone and fisheries since they are all part of a symbiotic system. There is awareness of potential water contaminants and an aggressive programme to stop pollution at its source, caused by both industrial and non-point source pollution, has been set up. Monitoring is conducted on surface, ground and lagoon water, and special attention is paid to effluents from industrial dyeing and washing activities. Pesticide use, agricultural chemical and haphazard disposal of waste have caused toxic chemicals to penetrate into the ground water. None of the sugar mills has water treatment facilities, and the wastewater they discharge into the rivers inevitably ends up in the lagoon. Deforestation on the steep slopes in the central region erodes topsoil and causes siltation of the river basins, ultimately ending up in the coastal zone. Due to uncertainties on the impacts of climate variability in the medium term and climate change in the long term, planning is done on a "business as usual scenario".

A thorough, in-depth hydro-geological study island wide was carried out from 1995 to 1999. This study has permitted a better definition and understanding of (a) the overall geology of the island, (b) the aquifer boundaries and potential, (c) direction of groundwater flow, and (d) risks to the groundwater resources of the Island.

Financing: Funding of most projects will be made by Government and external sources, which are as follows: World Bank, African Development Bank and Kuwait Fund.

Cooperation: Close cooperation exists between the managers of the water uses and the end users who receive water, other than for potable use, on a quota basis. This is regulated either through water rights or by mutual agreement. Mauritius is fully active in the UNESCO International Hydrological Programme (IHP). The IHP National Committee operates under the chairmanship of the Ministry of Public Utilities.

The general coordination for the Humid Tropics Programme for the East Africa Region (Theme 6 of the IHP) was offered to Mauritius in November 1997, on the occasion of the Launching Meeting of the Humid Tropics Programme held at the University of Mauritius.

The Water Resources Unit of the Ministry of Public Utilities provides facilities, since 1995, to foreign students wishing to carry out their university projects in Mauritius.

* * *

CHAPTER 19: ENVIRONMENTALLY SOUND MANAGEMENT OF TOXIC CHEMICALS, INCLUDING PREVENTION OF ILLEGAL INTERNATIONAL TRAFFIC IN TOXIC AND DANGEROUS PRODUCTS

Decision-Making: The import and use of Dangerous Chemicals are presently controlled under the following different legislations. 1. The Consumer Protection Act. 2. The Poison Regulations under the Pharmacy Act. 3. The Pesticides Control Act.

The government has prepared one comprehensive legislation for the control of import, manufacture, handling, use, storage and disposal of Dangerous Chemicals with a view to protect human health and the environment. Government actively participates in the implementation of the Prior Informed Consent (PIC) procedure under the Rotterdam Convention. Government has signed the Stockholm Convention and most of the Persistent Organic Pollutants have been banned.

Programmes and Projects: Government is seeking the services of an expert to carry out a survey on the use and the presence of asbestos in Mauritius, to assess the health dimension and to advise on a policy of removal and replacement.

Status: No information available.

Capacity-Building, Education, Training and Awareness-Raising: A National Sensitisation Programme on Health and Safety in the use of Chemicals is being organised by the Government.

Information: No information available.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: No information available.

* * *

CHAPTERS 20 TO 22: ENVIRONMENTALLY SOUND MANAGEMENT OF HAZARDOUS, SOLID AND RADIOACTIVE WASTES

Decision-Making:

Hazardous wastes: Under the present EPA, the Department of Environment is deemed to be the enforcing agency for hazardous wastes. It is being proposed, under the forthcoming Environment Protection (Amendment) Bill 2001, to also empower the Ministry of Local Government to enforce regulations on hazardous wastes. The Department of Environment (DOE) has recently drafted regulations, awaiting promulgation, aiming at defining hazardous waste, minimizing its generation, banning importation and controlling exportation of such wastes as well made under the Environment Protection Act. This is also in line with provisions made under the forthcoming Dangerous Chemicals Control Bill, where both the Department of Environment and the Ministry of Local Government will have specific responsibilities in relation to the collection, storage, transport, treatment and disposal of “chemical wastes”

Solid wastes: The Ministry of Local Government and Rodrigues (Local Government Division) is responsible for solid waste management in Mauritius. Its objectives, pursuant to the Legislation and Environmental Regulations formulated by the Ministry of the Environment is to develop, implement and maintain a sustainable waste management plan encompassing environmental criteria, social criteria, technological and economic criteria.

Radioactive wastes: The borehole disposal concept, whereby conditioned radium for the Africa region will be stored in one place probably in South Africa, is still under consideration.

Programmes and Projects:

Hazardous wastes: An interim storage facility will be constructed to house wastes, which cannot be treated on the island. In the solid waste management programme provisions have been made to construct pre-treatment and incinerator facilities.

Government is presently gathering information and planning remedial actions regarding asbestos, which are already present in some work places and buildings constructed in the past twenty or more years.

Information and data on the generation of hazardous wastes (both solid and liquid) will be collected in order to develop and implement an efficient hazardous waste management. Emphasis will be laid on development of environmentally-sound management of hazardous wastes.

Solid wastes: The first National Solid Waste Management Plan (NSWMP) was produced in 1994. This was to form a basis for future planning and action. The main priority of the projects undertaken under the plan has been the elimination of haphazard, uncontrolled waste disposal indulged a decade ago. One sanitary landfill has been designed and constructed. It is operational since September 1997. Furthermore, two new transfer stations have been constructed. This programme has led to the closing up of a great majority of dumping grounds. Feasibility studies are being conducted for the rehabilitation of some of the closed dumping grounds. These studies will provide the government with analyses, options, recommendations, design plans and proposals to achieve a sound basis for a decision on final design, project implementation, cost forecasting, operation and management, monitoring programmes, to ensure safe containment of the solid waste masses and to minimise the impacts of the closed dumps on the local environment. Government strategy for solid waste management is dictated by two broad principles:

- I. maximization of value derived from waste; and
- II. minimization of waste production.

Radioactive wastes: There is an AFRA project on Radioactive Waste Management (FAF/4/015). Under this project, it is hoped that an action plan can be set up to cope with an emergency as it arises.

Status:

Hazardous wastes: Mauritius has a landfill with a provision for cells to accommodate solid hazardous.

Solid wastes: A Compost market study is presently in progress. A compost plant of 10,000 tonnes per annum for green and park waste will be constructed and operated by year 2003. The plant will be extended to handle approximately 25,000 tonnes of green and household waste per year will help to achieve a sustainable waste management system.

The existing landfill will be extended. Rehabilitation works for a closed dumping ground will start shortly.

As regards collection of wastes, most of the populated areas are served by regular services. Furthermore, to encourage proper waste storage bins have been distributed to household units in a wide number of areas. Most of the public beaches are serviced regularly. Bins and other waste disposal/removal facilities are provided, to minimize physical damage to the beach environments. Landfilling alone therefore is no longer a viable solution for the future. Recycling of paper and cardboard and composting of sorted municipal wastes have therefore been under consideration. The design and implementation of a financially sound waste management become efficient only if the latter is backed by an efficient recovery mechanism. This has been a major constraint in further development in recycling, composting and incineration. In the long run a phased implementation of user charges, billing and revenue collection could be possible when, waste management services will have the same status as other public service systems, such as electricity, water and sewage. A comprehensive Solid Waste Management Act legislation will also be drafted.

Radioactive wastes: Radioactive waste, from hospitals and other laboratories are mainly from unsealed source, which have short half-lives and low activity. After use, the amount discharged into the environment is negligible.

Capacity-Building, Education, Training and Awareness-Raising:

Hazardous wastes: There is a long-term plan to train the staff of the Department of Environment and the Ministry of Local Government and other agencies. A workshop is being organised to inform all stakeholders on the provisions of the hazardous wastes and also the methods of effecting inventory.

Solid wastes: The Government agencies have together with the Mauritius College of the Air produced a number of programmes for educating adults and awareness. The University of Mauritius in collaboration with the Ministry of Local Government has recently launched a Certificate Course in Waste Management. This Course aims at increasing professional competency and knowledge for the Local Authorities Health inspectors and private operators.

Radioactive wastes: These may come as a result of Waste Management Regulations under the Radiation Protection of 1992.

Information:

Hazardous wastes: Under the draft regulations provision has been made for the submission to the enforcing agency on a quarterly basis an inventory of the hazardous waste generated, stored and disposed of by the generators. Relevant information will be widely disseminated.

Solid wastes: No information available.

Radioactive wastes: No information available.

Research and Technologies:

Hazardous wastes: No information available.

Solid wastes: Several experiments on composting locally available wastes such as market waste, scum, bagasse, sawdust, chicken waste and vegetable waste, paper have been carried out successfully in the laboratory at the University of Mauritius over the past 7 years.

Projects on automation of the composting process, aerated static pile composting and design of optimum household composter for Mauritius are still ongoing.

Radioactive wastes: No information available.

Financing:

Hazardous wastes: The collection, transport and disposal of the hazardous wastes are mainly financed by the State.

Solid wastes: The collection, transport and disposal of Municipal Solid wastes are mostly financed by the state.

Radioactive wastes: No information available.

Cooperation:

Hazardous wastes: The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal was signed and ratified in 1992 and the latest information was provided to the Basel Convention Secretariat in 1995. Mauritius has also ratified the Bamako Convention aimed at controlling the movement of hazardous wastes. Mauritius intends to work closely with the Regional Centres for Training and Technology established under the Basel Convention.

Solid wastes: No information available.

Radioactive wastes: No information available.

Environmentally sound management of sewage

Decision-Making: Mauritius prepared its Sewerage Master Plan in the early nineties for the better control and management of liquid waste, whether domestic and industrial. The Waste Water Authority was created with the aim to manage wastewater. Faced with more challenging problems and the demand from financing institutions the role of the authority has been given a new dimension. It is therefore logic to provide the authority with an autonomous status. The Wastewater Management Authority was proclaimed on 30th August 2001.

The Authority is now called to:

- Be responsible for the wastewater sector in Mauritius and carry out, monitor, supervise, maintain, manage and control wastewater works,
- Promote the treatment and reuse of wastewater
- Conduct and undertake research and studies for the implementation and development of projects relating to the wastewater sector.
- Ensure the generation of sufficient resources from tariffs to finance the operation, maintenance and depreciation of costs of wastewater systems, sewerage and sewage treatment installations,
- Ensure the proper functioning, inspection and maintenance of house sewers and wastewater systems,
- Control and monitor pollution, private sewers and the use of equipment in relation to wastewater systems,

The duty of the authority is now as follows:

- Take over, maintain and manage all existing public sewers and wastewater systems existing in Mauritius
- Manage and run any wastewater system including public sewers or equipment whether vested in it by way of a "Contract de delegation" or otherwise
- Recover through tariffs user fees that may be claimed in respect of the lease of assets under a "Contract de delegation"

- Extend as far as practicable the public wastewater system so as to provide sewerage facilities to all properties, domestic, commercial or industrial,
- Undertake wastewater treatment to such predetermined quality as may be prescribed for the safe disposal of the effluent and sludge to the environment or reuse,
- Carry out or coordinate studies for the implementation of any project which may be devised for research and investigation for the economic collection, treatment and safe disposal of wastewater
- Control and monitor the pollution discharged to wastewater systems by any person
- Ensure that any storm drainage is not connected or does not get mixed up with the wastewater system,
- Regulate the construction of private sewers, enforce their maintenance according to such standards as may be prescribed and provide for their inspection
- Establish and maintain laboratories for the purpose of testing wastewater and sanitary equipment, and
- Carry out against payment of such fees as may be prescribed for and on behalf of any Authority or organisation responsible for the enforcement of wastewater laws, any wastewater analysis, which may be necessary for such enforcement.

Programme and projects: The strategies for the management of wastewater have been addressed in the form of programmes and projects in the Master Plan. The measures so earmarked, whether in the short term, medium term and long term have either been implemented or presently being implemented.

The table below gives a resume of the projects:

Year	Project	Completion scheduled on	Project Value Estimates (Rs. m)
90-91	CHA Phase I	1995	50
91	Sewerage Master Plan	1991	EIP II
95	Urgent Works	1996	100
2000	Baie du Tombeau	2002	750
2001	G. Bay Sewerage	in progress	700
2001	Mt. Jacuot Sanitation Proj.	in progress	1370
2001	St. Martin treatment plant	in progress	919
2001	Study Pailles/Guibies		500
2002	Study Western coast		500
2001	Free house Connection		2300
2001	Plaines Wilhems trunk sewer		3333
		Total	10522
			Say MUR11b

Status: The recommendations of the Sewerage Master Plan are being implemented. As stated above the major projects that needed urgent attention have been implemented or are being implemented. Being given that sewerage projects require enormous investment, the implementation of the measures cannot be effected in one stretch. However, it is interesting to note that prior to the works in progress less than Twenty per cent (20%) of the population had access to a waterborne sewerage system. After completion of the projects listed above at least fifty per cent (50%) of the population will be connected. The ultimate aim is to cover the island with a sewerage network.

Capacity building, Education, Training and Awareness-raising: The Wastewater Management Authority is deemed to function as a body corporate. It has presently a structured organigram comprising of four distinct units viz.- The Pollution Control Unit, the Project Management Unit, The Operation and Maintenance Unit and The House Connection Unit. The Wastewater Laboratory provides backup support in monitoring effluent quality of the sewer users. The Corporate Plan that will be prepared will redefine the roles and attributes of the existing set up as well as provide a reengineering of the organization structure.

Information: Up to now the Authority has been participating in national activities such as World Environment Day, World Water Day and the like. The need and benefits of the sewer system has been aired to the public at large through video clips and adverts on the television. Pamphlets have been prepared and distributed to the general public. Officers from the Authority are also invited to give talks on wastewater issues to schools, industrialists and other private bodies.

Research and Technologies: The Authority has not extensively launched research studies. However, it has given its support to institutions, or persons who have shown interest in research works in the treatment of wastewater. There is presently a research cum pilot project on the reuse of sewage sludge into compost. This study is conducted in conjunction with the MSIRI. The compost so obtained will be applied to sugarcane plantations. A similar exercise is being executed by the AREU but the application of the compost will be on agricultural farms.

Financing: The financing of projects cannot be wholly met from the national budget. Funds are either sought from financing agencies or obtained as grants. Some of the financing agencies/communities are the World Bank, European Union, BADEA, AFDB, KfW, NIB, OECF, EDF, EIB, ExIM, ADB and Kuwait Fund. However, in all projects the Government of Mauritius is bound to contribute partly in the financing.

Co-operation: Co-operation has been limited to the national context only. Technical expertise has been provided to both public and private sectors in the domain of wastewater. There have not been many co-operations in the regional context being given the local urgent needs. The Authority is now looking forward to open avenues of co-operation in the island of Rodrigues.

* * *

CHAPTERS 24 TO 32: STRENGTHENING THE ROLE OF MAJOR GROUPS

Women:

Decision-making: Equality, shared power and responsibility between men and women have been advocated for a more sustainable human development in all aspects of life. However women's participation at higher Decision-Making levels remains quite low compared to other African countries even though there is a slight increase over the years. The number of women in the government increased from 24% to 29% in the period 1992-1996. At the local government level the percentage remained at 1.4%. The number of women in Parliamentary increased from 3.3 % to 9.7 % compared to 12.8 % in Mozambique in 1996 and 13.5% in Botswana for the same period. The Ministry of Women's Rights, Child Development & Family Welfare has set up focal points of contact within major ministries so as to mainstream gender in all policies, programmes and projects. Women are being encouraged to regroup and sensitised on their political, social and economic roles through a national platform, the National Women's Council that regroups some 1000 women associations.

Programmes and Projects: No information available.

Status. No information available.

Capacity-Building: In order to strengthen the gender concept right from an early age it has been suggested that the school curriculum is reviewed so as to remove stereotyping in the education programmes. Throughout the community based centres specially targeting women sensitisation programmes on the environment is being carried out. Agricultural clubs have been set up in Women Centres. Fisher women are being sensitised on the impact of misuses of lagoons for fishing and are given opportunities to change their adverse practices particularly in Rodrigues. Regular activities are organised to sensitise women on environmental issues to mark the International Environment Day, starting from garbage collection at home to cleaning public beaches. Kitchen gardening projects are also being encouraged through the clubs.

Education, Training and Awareness-Raising: No information available.

Information. No information available.

Research and Technologies: No information available.

Financing. No information available.

Cooperation: The CEDAW, Convention on the Elimination of all Forms of Discrimination Against Women was signed on July 1984. The Convention provides for affirmative action through the implementation of measures geared towards equal opportunity and equal rights for men and women including elimination of stereotyping and sex roles. Since 1984 through the Ministry and other mechanism policy and legal measures have been taken in the field of education, employment, economical and social benefits to enable women enjoy the same rights as men. And this year Mauritius ratified the Optional Protocol that enables individual complaints' procedure. However not much awareness has been raised on the existence of such a convention and its implications in terms of women's rights. Government and women's pressure groups could be more pro-active to help on the implementation of affirmative actions enabling greater gender equity and enable greater participation for a more sustainable development.

Children and youth:

Children:

Decision-making: Following the signing of the Convention on the Rights of the Child in July 1990, a National Children's Council was enacted in 1990 to set up a National Children's Council, a Child Protection Act was enacted in 1994 to ensure protection of children from all abuse and exploitation. The Act was amended in 1998 to make it an obligation for person exercising any medical or paramedical profession or a member of the staff of a school to report suspected cases of child abuse and to include sexual harm in the definition of abuse.

Programmes and Project: In 1998, a Protection of the Child (Miscellaneous Provisions) Act was enacted to amend many laws in order to protect children from abuse and exploitation, in line with the articles of the Convention on the Rights of the Child. The Criminal Code (Amendment) Act and the Criminal Code (Supplementary) Amendment act were enacted providing for more severe penalties in cases of sexual abuse and exploitation of children, including trafficking and prostitution. New sections pertaining to sexual harassment, sexual abuse against boys, family abandonment, abuse and exploitation of handicapped children were introduced.

In 1997, the Protection from Domestic violence Act was enacted to protect spouses from domestic violence and at the same time ensure protection of children. The Act provides for Protection Orders, which restrains the abuser from further violence and orders him to be of good conduct. The order can last for a period not exceeding 24 months; Occupation Orders, which grants exclusive right to the victim to live in the residence which may belong to the victim or the abuser or both and Tenancy Orders which gives the victim the exclusive right to occupy rented house and if the house is rented by the abuser, he would have to pay the rent.

In September 2000, the Government has set up a task force to review all laws concerning children as well as their enforcement procedures. The task force includes NGO's and other stakeholders. It aims at making the laws more effective and ensures that procedures are more child-friendly.

Status:

Capacity-Building, Education, Training and Awareness-Raising: A National Children's Council (NCC) was set up in 1990 to ensure that both governmental and non-governmental organisations work together for the welfare of children. It is expected to coordinate the activities of the organisations working towards the welfare of children. A review of the Council was conducted in 1998 with the aim of making it more dynamic and responsive to the needs of children and to ensure the participation of children. A new Bill for the NCC is being prepared.

Since 1991, the National Adoption Council which deals with issues relating to adoption and follow-up of children adopted by foreigners has come under the responsibility the Ministry of Women's Right, Child Development and Family Welfare.

A Child Development Unit (CDU) was set up in 1995 and has been decentralized in five different regions. The CDU has a mandate to enforce the Child Protection Act and to implement policies and programmes for the development of children. The CDU works closely with other agencies such as the Police Department. A 24-hour service is provided through hot lines to children at risk and free legal assistance and psychological counseling are offered to children. A Child Protection Unit has been set up on a pilot basis to provide multi disciplinary and integrated services in cases of child abuse. Area Child Protection Committees have been set up and a National Child Protection register is being prepared. A Child Watch network comprising social workers has been established on a pilot basis as an informal group to ensure surveillance and early detection of cases of children who are at risk.

In line with Article 31 of the Convention on the Rights of the Child the Government has set up 21 Children's Clubs throughout the island. The clubs offer children the opportunity to participate fully in cultural, artistic, recreational and leisure activities. The clubs are being reviewed to ensure that children participate in decision-making. A

national children's organisation will be set up. A Creativity Centre for children has been constructed to enable children to engage in recreational activities during holidays and school terms.

In 1993, Government signed the Hague Convention on Civil Aspects of Child Abduction and in 2000 legislation was enacted to designate the Ministry of Women's Rights, Child Development and Family Welfare as the Central Authority to deal with civil cases of child abduction.

Information: No information available.

Research and Technologies: Since its creation, the National Children's Council has been responsible for disseminating the Convention on the Rights of the Child through aggressive sensitization and IEC campaigns. Publications including posters and booklets on articles relating to the Convention have been disseminated regularly. All Ministries were provided with a copy for information and action as appropriate. Non-governmental organisations directly involved with the promotion of women's and children's rights also received copies of the Convention for sensitizing their members thereon. Students of primary and secondary schools throughout the island have benefited from the IEC programmes. In secondary schools, debates and projects on issues related to the Convention were organised. Grass root level people who would not have been able to read and understand the Convention were given explanations through talks and seminars.

Various legal amendments have been brought to give effect to the Convention but these laws are not sufficiently known to the public. The principles and provisions of the Convention are equally not clearly understood by many people. There is a need for dissemination of the Convention in the local languages. An international treaty such as the Convention on the Rights of the Child cannot be invoked per se before a Court of Law, but may be cited in Court in support of a given argument. A task force has been set up by Government to make recommendations on the implementation of the Convention and the enforcement of legislation relating to children's rights.

Financing: No information available.

Cooperation: The NPA incorporates actions to be taken by Government departments, non-governmental, organisations and other child-related institutions, based on the framework provided by the Convention, the goals of the World Summit for Children and the country's development programme.

Youth:

Decision-making: The Ministry has encouraged decision taking at different levels namely:-

- consultative committees at youth centre level
- youth clubs, regional youth councils at district level headed by the National Youth Council which operates at national level
- Environment unit at ministry's level which coordinates activities emanating from the above mentioned and initiates action.
- Various workshops are organised by the CONPEGES (Conference des Ministres de la Jeunesse et des Sports des pays/Francophone d'Afrique) et de la CJSOI (Commission de la Jeunesse et des Sports de L'Ocean Indien). It is proposed to encourage the creation of environment clubs at youth centre levels.

Programmes and Projects: The Ministry already organised two major events to commemorate **World Environment Day** viz Global Youth Forum and Youth and Environment. Talks and seminars are being regularly organised for the benefit of youth leaders through leadership training course. Young people regularly organise activities on preservation, cleaning, and embellishment in their own localities. Young people of the Indian Ocean meet in one of the countries of the Indian Ocean on a rotation basis to implement a programme on environment.

Status: It is proposed to empower the different committees to take necessary steps so that environment becomes one of the priority areas of their actions.

Capacity-Building, Education, Training and Awareness-Raising: The advisory committees and cadres of this ministry, who operates in a region through the youth centres around the island organise leadership training courses, peer educators sessions for the benefit of young people. The A Nous les Vacances programmes present a golden opportunity for young people to be made aware of various aspects of the environment which must be preserved. Distribution of fruit and decorative plants is a way for them to contribute directly in the preservation and environment in a practical manner.

Information: No information available.

Research and Technologies: No information available.

Financing: Programmes mentioned above are financed out of the ministry's budget and sometimes input from the ministry of environment in case of joint projects.

Cooperation: No information available.

Indigenous people: No information available.

Decision-making, Programmes and Projects, Status, Capacity-Building, Education, Training and Awareness-Raising, Information, Research and Technologies, Financing, and, Cooperation.

Non-governmental organizations: No information available.

Decision-making, Programmes and Projects, Status, Capacity-Building, Education, Training and Awareness-Raising, Information, Research and Technologies, Financing, and, Cooperation.

Local authorities:

Decision-making: Decision of Local Authorities are taken by a Council of elected members and implemented by an administrative arm headed by a Chief Executive. The powers and responsibilities of the Municipal and District Councils are contained in Section 51 of the Local Government Act 1989. For the purpose of carrying its duties, the council has five standing Committees, namely the Finance Committee, the Works Committee, the Public Health committee, the Welfare Committee and the Committee of the whole council. The Council may as well appoint such number of committees as may be desirable for the proper administration of the affairs in the area under its jurisdiction. The Local Government Act 1989 also defines the jurisdiction of the respective municipal or district council area. The obligatory functions of the Municipal/District Council include the provision of sanitary and cleaning services, town cleanliness, provision of welfare and recreational facilities, parks and gardens, control of markets and fairs, preparation of local plans, construction of secondary roads, drains, buildings and maintenance of cemeteries.

Programmes and Projects: The Municipal/District Councils cater for the needs and welfare of their inhabitants. With the rapid changes in standard of living that have taken place both at national and international levels and the challenges brought with them, considerable efforts have been made by the councils to offer the best services in terms of waste collection and disposal, road infrastructure, lighting, sanitation and welfare and recreational activities to improve the *quality of life of the inhabitants*. Efforts are also directed towards the change in behavioural patterns and achievement of responsible attitude towards the environment. Preserving the existing global resources of the area and consolidating its physical environment area also a priority. New policies have been designed and objectives set which also include the security of the citizens throughout the Municipal/District Council area, the elimination of health hazards, improvement in mobility and the upgrading of human settlements.

The objectives of the Municipal Council are to continuously deploy effort to control waste collection. Thus, scavenging services are now provided in almost all regions on a regular basis and green spaces are being provided in a large number of areas. In certain Council areas refuse bins have been distributed to both the households and the trades. One Council has an in-house team for rodents control. Pit latrines are being gradually eliminated. Dredging and de-silting works are being undertaken in drains and rivers to protect the inhabitants from flooding in rainy seasons.

Status: No information available.

Capacity-Building, Education, Training and Awareness-Raising: The objective of the Municipal/District Council is to have a trained and motivated staff to meet the challenges in providing the proper socio-economic services to the inhabitants. It is proposed to establish a comprehensive training programme could be planned and implemented to cater for staffs' skills development in every local authority. During the past years, some councils have been providing training to employees in the fields of solid waste management, food sanitation, construction, customer care, Town and Country Planning etc. The Municipal council of Port Louis has embarked on a programme aimed at making the Council ISO 9001-2000 and ISO 14000 Certified. The Councils also regularly organise workshops and awareness campaigns in areas of interest for the benefit of employees and the inhabitants.

Information: The objective of the Municipal/District Council is to have a trained and motivated staff to meet the challenges in providing the proper socio-economic services to the inhabitants. It is proposed to establish a comprehensive training programme could be planned and implemented to cater for staffs' skills development in every local authority. During the past years, some councils have been providing training to employees in the fields of solid waste management, food sanitation, construction, customer care, Town and Country Planning etc. The Municipal council of Port Louis has embarked on a programme aimed at making the Council ISO 9001-2000 and ISO 14000 Certified. The Councils also regularly organise workshops and awareness campaigns in areas of interest for the benefit of employees and the inhabitants.

Research and Technologies: There is presently no Research and Development Unit at the level of the councils and all current knowledge are imported from other sources.

Financing: Funds for the proper financing of the Council activities are obtained through the annual estimates based on grants from the Central Government and council revenues in the form of licence fees, general rates, advertising and market fees. Capital projects of the Council are financed by budgetary surplus and other special funds set up by the Government.

Cooperation: The Municipal Council of Port Louis has co-operation with various external bodies and towns, such as the Association International des Maires Francophones (AIMF) and sister cities in reunion, China and France. It is expected that such collaboration will allow for an exchange of information and transfer of technologies and training of personnel. In regard to hazardous wastes, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal was signed and ratified in 1992 and the latest information was provided to the Basel Convention Secretariat in 1995. Mauritius has also ratified the Bamako Convention aimed at controlling the movement of hazardous wastes.

Workers and trade unions:

Decision-making: The Ministry of Labour and Industrial Relations is in the process of reviewing the existing Occupational Safety, Health and Welfare Act – Act No. 34 of 1988 with a view to improve the status of safety and health of persons at work. “Noise at Work” and “Electricity at Work” Regulations have also been drafted and are awaiting their vetting by experts in the respective fields from the ILO.

Programmes and Projects: The Ministry will launch a sensitization campaign on safety and health at work in October 2001. The objective is to sensitize as many workers, students, employers, trade union representatives and the public at large on the issue of safety and health at work. It is also proposed to decentralise the Occupational Safety & Health Inspectorate service so as to be easily and readily accessible to the worker.

Status: Preparatory work has already started to implement the sensitization campaign in October 2001.

Capacity-Building, Education, Training and Awareness-Raising: The Labour Information Centre under the Ministry of Labour and Industrial Relations is the Unit which provides training to workers at its Centre as well as on-site. From 29 January to 14 December 2001 thirty-three such sessions have been organised. Recently eleven Occupational Safety & Health Inspectors have been recruited and the capacity of the staff at the labour Information centre has consequently been strengthened.

Worker and public awareness is being raised during training sessions; however, in the context of the sensitization campaign, the distribution of pamphlets, posters and stickers on the issue of safety and health at strategic points in schools, colleges, parastatal bodies and other public places will have a considerable impact on the public response to safety and health at work.

Information: No information available.

Research and Technologies: No information available.

Financing: Training activities on safety and health are being financed out of the Ministry's budget.

Cooperation: No information available.

Business and industry:

Decision-making: Sustainable industrial development falls under the aegis of the Ministry of Industry, Commerce and International Trade which aims at:-

- creating a strong, diversified, high value-added and competitive industrial sector;
- expanding trade and fostering a smooth exchange of goods at the national, regional and international levels;
- ensuring regular supply of essential commodities, fair trading and competition and effective protection of consumers; and
- promoting investment into production systems for enhancing competitiveness and improvement in the standard of living in general.

For the promotion of sustainable industrial growth, Government has identified the following policy measures for the industrial sector:

- consolidation and modernisation of the industrial sector;
- diversification of products and markets;
- integration of the EPZ and non-EPZ sector;
- promotion of SME's;
- favouring of industrial linkages and formation of clusters;
- taking full advantages of the Africa Growth Opportunity Act (AGOA) and any other regional trading opportunities offered by the SADC Trade Protocol, CBI & COMESA.

In order to fulfill the above objectives, Government has set up the necessary mechanisms so as to create a conducive environment whereby all the major stakeholders namely the public, private and trade unions can co-operate actively. As such, the Export Processing Zone Development Authority (EPZDA) act as a facilitator and

catalyst in forging the competitive edge of all export oriented activities through the promotion of quality, productivity and innovation.

Small and Medium Industries Development Organisation (SMIDO) was established with the aims at fostering growth and development of Small and Medium Enterprises (SMES) in Mauritius and Rodrigues. The core objectives are to:

- promote modernisation, expansion and integration;
- facilitate linkages by way of sub-contracting;
- organise training for small entrepreneurs;
- disseminate information and carry out research on small firms;
- assist in marketing and production organisation;
- provide extension services;
- provide common facilities in repairs and maintenance and increase the level of innovation in small firms;
- create a mindset for productivity and quality

Mauritius Investment Development Authority (MIDA) was set up in a vision to position Mauritius as a World Class Export Hub and to promote the export of manufactured goods and services on international markets. The main objectives are to:-

- consolidate the position of Mauritius in its traditional markets;
- diversify the export markets of Mauritius and reduce dependence on existing markets;
- expand the range of exportable products;
- establish the image of Mauritius as a reliable supplier of quality products and services;
- develop export awareness among SMEs;
- integrate SMEs which are export-ready in MIDA's export promotion activities;
- be the focal point for up-to-date market intelligence;
- provide an efficient and effective service to Mauritian exporters and overseas buyers.

In 1991, the Industrial Act was promulgated so as to fulfill part of the objectives of the Ministry. Recently, the Board of Investment (BOI) has been set up so as to help in attracting foreign direct investment in all sectors of the economy, which is a critical component for sustaining economic expansion and development.

Permanent Residence Scheme and Regional Headquarters Scheme which are also effective measures that contributes towards transforming Mauritius as a regional business hub have been enacted and are already being implemented.

Government has also set up a high-powered committee on Textile and Clothing (which is the back-bone of the EPZ sector representing about 80% of total exports) with the main objective of developing a strategy so as to take full opportunities of AGOA and also to adapt to changes occurring on the international scene.

It must also be admitted that our manufacturing sector is actually facing tough competition on the international scene especially from low cost producing countries. Moreover, there is also problem of increasing production costs, inability of the EPZ sector to attract labour and thus having recourse to expatriate workers, absence of skilled labour and relatively low productivity and financial difficulties due to high rate of indebtedness.

Programmes and Projects: The main objectives of the Programmes and Projects that are being implemented are:

- strengthening and modernising of the manufacturing sector.
- Institutional strengthening.

Under strengthening and modernising of the manufacturing sector the following have been undertaken:

- Construction of 3 industrial estates is being undertaken for housing SME's.
- Training and courses in different fields for SME's organisation.
- International exposure to SME's through the organisation of fairs.
- New incentives are being developed for the promotion of SME's and an EU consultant will be recruited so as to implement European Union (EU) projects.

Under Institutional Strengthening the following have been undertaken:

- Setting up of the Board of Investment.
- Promotion of new standards for discharge into different media, i.e. air, land and water.
- Promulgation of the PET regulations 2001 which aims at the collection and recycling of PET bottles.

Status: The term "sustainable development" has become widespread among the business community, however, to reconcile the conflicting ends of rising costs and environmental protection, enterprises are finding it difficult. In Mauritius the production processes in most enterprises is mostly pollution free, except for dye-houses and stone-crushing activities. The production system in Mauritius involves the use of imported resources and materials, as the country is not endowed with natural resources.

EPZDA has set up a modular productivity programme comprising of work management programme, labour productivity control system, development in R & D and CAD centre which aims at helping enterprises in restructuring themselves and adapting to changes occurring on the international front.

Training courses for quality enhancement is being organised by EPZDA with Bureau Veritas. MIDA will undertake surveys in order to investigate the sectors that do have the potential for exporting.

Capacity-Building, Education, Training and Awareness-Raising: Several scholarships have been made available from India, Singapore, Australia and Malaysia for training courses in Industrial Planning, Strategy and Technology Transfer. Course in productivity have also been imparted to officers of the Ministry and their outcomes have been disseminated to the Business community.

MEPZA, Mauritius Employer's Federation and the University of Mauritius have also trained the business community in different spheres of industrial planning, policy making, and labour laws.

Information: A Business Intelligence Unit has been set up so as to provide to Decision-Making with the latest data pertinent to trade and industry. Thus prompt action can be taken.

Research and Technologies: Covered under chapter 34 transfer of Technology

Financing: UNIDO has proposed its assistance to Mauritius to implement a programme for sustainable development through "application of economic incentives for internalisation of environmental cost".

A study in the textile sector was financed by UNIDO (Gherzi report).

A study on "Investment Policy review" was financed by UNCTAD and one of its main recommendations, i.e. setting up of a Board of Investment has already been implemented.

Cooperation.: Mauritius is a member of different regional block such as Indian-Ocean RIM, Southern African Development Community, COMESA (Common market for the Eastern and Southern Africa), I.O.C. (Indian Ocean Commission). Mauritius is also a member of the LOME Convention which is an agreement between ACP countries and the EU.

Scientific and technological community:

Background

Conscious of the need for striking a balance between economic development and a safe environment, the Government of Mauritius is laying a lot of emphasis on sustainable development and clean technologies. The Government is thus committed in providing manpower training in the fields of science and technology.

Scientists and technologist have a critical role to play in the protection of the biosphere. While the basic ecological cycles are known, the complexity of interactions in the environment still requires further research to be understood. This implies a strengthening of the role of scientists and technologists. In order to enhance their role, the Government of Mauritius is investing heavily in new technologies and in training. Since the RIO conference, the University of Mauritius has invested in new buildings and equipment and has developed a successful programme for the upgrading of the qualification of its staff members. This has resulted in an increase in student intake and in the development of new courses like the Diploma in Fisheries for the staff of the Ministry of Fisheries and the MSc in Environmental Engineering.

Until recently, most of the undergraduate training used to be carried out by the University of Mauritius. However, this year, with the opening of the University of Technology of Mauritius, this role is now shared between the two institutions although the fields of training of the new university are still limited at this stage.

In addition, staff of ministries involved in environmental matters, regularly follow refresher courses in order to keep abreast of new developments.

Decision-making: There are two major tertiary institutions in Mauritius. The University of Mauritius started its activities in 1965 and has evolved gradually from a purely teaching institution to one engaged in teaching, research and consultancy. The Mauritius Technology University has started its activities in September 2001. Both Universities are under the responsibility of their respective Councils and the day to day running of the institutions is delegated to a Vice Chancellor or Director. Two pro-vice chancellors are responsible for curriculum development while the other is responsible for research and consultancy.

Programmes and Projects: The University of Mauritius runs programmes at Diploma, under-graduate and post-graduate levels. On most diploma and degree courses, there are modules directly related to environmental issues. In addition the Faculty of Engineering also runs a MSc. in Environmental Engineering.

A part of all taught courses at the University, students have to carry out a research project. In most cases, students are requested to study a problem, which is of direct relevance to Mauritius. This ensures collaborative work between the University and other institutions in Mauritius.

Status: No information available.

Capacity-Building, Education, Training and Awareness-Raising: The University has been running courses at the request of certain ministries to enhance their capacity building. Thus, courses have been run for the Ministry of Health (Diploma in Public Health), the Ministry of Fisheries (Diploma in Fisheries). Also some staff members of the Ministry of Environment are enrolled on the MSc course in Environmental Engineering. In addition, the University of Mauritius collaborates with the Mauritius Institute of Education in running the Bachelor in Education course.

The University in collaboration with the Ministries and the private/parastatal organizations run regular short training courses on environmental issues for practicing engineers and scientists. These courses are normally well attended and in most cases a resource person from abroad collaborates on the course. Programmes to raise

awareness organized by Ministries receive the full support of the University of Mauritius. Thus, staff of the University of Mauritius participates in various national seminars.

Information: The University of Mauritius has a research journal where academic staff publishes the results of their work. In addition, they collaborate with other local journals. In general, the dissemination of information is done through the various media.

Research and Technologies: The University of Mauritius has been engaged on major projects related to the environment. Thus, the management of industrial wastewater, solid waste and ground water has been studied fairly extensively at the Faculty of Engineering of the University of Mauritius. Topics such as the Marine Environment and Conservation Biology are studies at the Faculty of Science. In most cases, up-to-date technologies have been used through the collaboration between the University and the other relevant institutions.

Financing: The University of Mauritius receives most of its funding from the Government of Mauritius. Part of the running cost is also met from registration fees, consultancy funds, the Mauritius Research Council and other funding agencies.

Cooperation: The University of Mauritius works in close collaboration with local institutions and joint projects are carried out with the various other research organizations. Memorandum of Understanding also exists between the University of Mauritius and various local and foreign organizations. The MERMAID (Mauritius Environmental Resource Management and Industrial Development) project initiated by the University of Mauritius in 2001 takes on board all the stakeholders involved in environmental protection. On the regional side, the University of Mauritius has been running courses for the Université de l'Océan Indien in the field of wastewater management and solid waste management.

Farmers:

Introduction

Farmers are the implementing force for any project/plan which the Government thinks fit for the execution of its strategic plan. They are the custodian of indigenous knowledge, safely value for food security and an important parameter in the social stability of the Mauritian society. In its endeavour, the parent ministry, Ministry of Agriculture, Food Technology and Natural Resources is closely associated with other ministries that deal with the grass root of the society, e.g. Ministry of Co-operatives and Handicraft, Environment etc.

Decision-making: Policies and strategies are being implemented according to the market demand. The farmers are regularly visited by the Extension Department of the Agricultural Research and Extension Unit (AREU). It is a parastatal body within the Ministry of Agriculture. The duty of the Extension officer is to propagate new technology from research and take the problem of the farmers back to the research. They are the liaison officer between the Ministry and the farmers.

Recently, seminars and brainstorming sessions were organised by the Ministry to write a five year strategic plan for agriculture, after taking heed of the market trend. The strategic plan is in its final stage of preparation. It deals with a production strategy with emphasis on environment friendly technologies. As the farmers are weak and vulnerable section of the population, the Ministry of Co-operatives plays an essential role in their socio-economic development.

At present there are 560 co-operatives societies engaged in not less than 35 different activities. Hereunder are some of the statistics of active co-operative society in the agricultural and support services.

Agricultural & Support Services	No of	Registered	Turnover
--	--------------	-------------------	-----------------

Primary Cooperatives Societies	Societies	Membership	(Rs'000)
Agricultural Marketing	39	3,623	12,492
Beekeepers	2	243	-
Cane Transport	1	70	167
Cardamon Growers	1	20	-
Coop. Credit Societies	178	42,003	914,336
Fishermen	20	545	2,970
Horticultural Produce	2	137	-
Livestock	2	789	-
Mechanisation	67	826	66,563
Mixed Farming	9	489	10,665
Pig Credit & Marketing	13	1,305	104
Poultry and Egg Producers	2	381	235
Sand Quarrying	25	347	71,611
Tea Credit & Marketing	10	2,321	7,308
Tea Converted to multipurpose	10	5,406	4,868
Water Users	5	539	721
TOTAL	386	59,041	1,092,039

The Ministry of Agriculture is working at present on laws concerning of Intellectual Property Right (Sui generis as required by WTO) Bio-safety and seed laws concerning access and quarantine regulations. These works are done in collaboration with the State Law Office.

Programmes and Projects: An important irrigation projects are underway in the North and Western part of the country, where drought is prevalent. This project is a part of National project to ease distribution of water in the Northern sector of Mauritius. It is called the "Midland Dam Project". Is is financed by foreign capital. In addition, the farmers benefit from various incentives to implement small projects. They are, among other Technology Introduction and Diffusion schemes (TIDS), Information Technology Scheme, consolidation of co-operative and promotion of multipurpose activities scheme.

The TIDS assists small farmers at implementing important projects where the small farmers are assisted with technologies advice and experts.

The information Technology Scheme, patronized by the Ministry of Co-operative encourages farmers to computerize their activities following a grant formula representing 40% of the cost of the computer. In addition, the co-operative society benefit from a grant of Rs 20,000/- for the purchase of computers.

Status: No information available.

Capacity-Building, Education, Training and Awareness-Raising: TIDS hired professional from abroad on relevant topics of agriculture to assist the farmers, who are implementing specific project. That is accompanied with seminar and lectures to farmers and academic staff. The extension services of AREU, on regular basis, organise lectures to educate the farmers' communities. The farmers are kept inform of the latest advance in technology. Every week, these officers take advantage of the media, both television and radio, to talk to the farming communities. Agricultural demonstration centres which are spread across the island, are used as a meeting place for the farmers where the latter came to discuss their problems and learn about the incentives given by the government. In Rodrigues, a special education programme has been worked out for would be farmers. Elementary principles of Agriculture are being taught. On special occasion, agricultural fair are being organised for the benefit of farmers.

Information: No information available.

Research and Technologies: In the 80's the Ministry of Agriculture had its own research department. However, in the 90's the department had been transferred to the Food and Agricultural Research Committee, which is a parastatal body. They are now implementing agricultural research on food crops and animals of economic interest. Many projects are underway, namely biological control of insects in a vast array of field crops, economic production of food crops, tunnel culture, hydroponics and organic farming. The programme on work is conformity to the spirit of CBD.

In addition at the Ministry there are two divisions, which are looking after bio-diversity – Natural Park and Conservation and the Plant Genetic Resource Unit. The former looks after endemic species, i.e management, conservation and implementation of project making to bio-diversity while the latter caters for genetic materials in Food and Agriculture. The PGR has for mandate to conserve both in-situ, characterize, store and make sustainable use of these genetic materials.

Financing: All these activities are being financed by the Government of Mauritius through the Ministry budget. In some instance, certain projects are financed by external donor e.g. UNEP or SADC Plant Genetic Resource Centre (SPGRC).

Cooperation: No information available.

* * *

CHAPTER 33: FINANCIAL RESOURCES AND MECHANISMS

Decision-Making: No information available.

Programmes and Projects: No information available.

Status: No information available.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: No information available.

Research and Technologies: No information available.

Cooperation: No information available.

* * *

CHAPTER 35: SCIENCE FOR SUSTAINABLE DEVELOPMENT

Decision-Making: The Mauritius Sugar Industry Research Institute (MSIRI) is involved in sugar cane research. The Food and Agricultural Research Council (FARC) is involved in research in agriculture, fisheries and food production. The Mauritius Research Council (MRC) promotes research and development in scientific, technological, social and economic activities. Information Technology Institutes like the National Computer Board, the Central Informatics Bureau and State Informatics Ltd promote information technology in various sectors. The Technology Development Project promotes diffusion of up-to-date technology practices to industries.

Programmes and Projects: In the context of the proposed curricular reforms at the primary school level, Environmental Studies is being split into Science and History/Geography. The national policy is to increase enrolment in science and technological subjects. The newly established University of Technology, Mauritius, is expected to help in this process.

A few projects funded under the UNDP GEF Small Grants Programme have seen the development or adaptation of innovative scientific technologies to suit the local requirements. For example, one project in Rodrigues has seen the adaptation of a composting method for agricultural wastes and the setting up of solar photovoltaic water pumping systems for micro-irrigation in an agricultural valley. Other projects are heavily focused on biodiversity (terrestrial and marine) conservation for sustainable development.

Status: At primary level science merges into formal science within the context of Environmental Studies. Training of teachers for the primary level is ensured by the Mauritius Institute of Education. Science subjects are compulsory up to form III There are plans of extending it to Form V. All State Secondary Schools are equipped with Science laboratories. At the University of Mauritius, Science and Technology education is provided principally by the Faculties of Agriculture, Engineering and Science. The level of courses offered range from certificate to PhD.

Capacity-Building, Education, Training and Awareness-Raising: The University of Mauritius has been expanded in order to increase its intake of students. The Mauritius Institute of Education provides training of teachers. The Ministry of Education, Science and Technology promotes scientific knowledge and the study of science. The Ministry of Human Resources, Development and Reform Institutions implements vocational, technical and other training programmes to have trained manpower for industrial, services and other sectors.

Awareness-raising on the threat of environmental problems for sustainable development is done through many of the GEF/SGP funded projects.

Information: No information available.

Research and Technologies: The creation of the Mauritius Research Council in 1992 provided the necessary institutional framework for assisting in the development of a national Science and Technology policy and planning and to create an enabling environment in which the Government, private sector education and training sector research and institutions and the community as a whole could contribute to capitalize on research in Science and Technology No information available.

Financing: Financial support comes mainly from Government funds. UNDP GEF/SGP has financed a number of projects.

Cooperation: No information available.

* * *

CHAPTER 36: PROMOTING EDUCATION, PUBLIC AWARENESS AND TRAINING

Decision-Making: Whilst formal environmental education falls under the responsibility of the Ministry of Education & Scientific Research, informal environmental education and public awareness are promoted by the Ministry of Environment. In this regard, the Ministry of Environment has established close links with various local agencies such as the Mauritius Institute of Education (MIE), the Mauritius College of the Air (MCA), and the National Centre for Curriculum Research and Development (NCCRD), and regional organizations like SADC (Southern African Development Community) and IOC (Indian Ocean Commission).

The Ministry of Training, Skills Development & Productivity is responsible to formulate, legislate and implement policies that drive strategically our human resources towards a knowledge based economy.

The Occupational Safety and Health Inspectorate of the Ministry of Labour & Industrial Relations regularly organize training sessions on occupational and health, including work environment for workers, Trade Union officials, Managers, Occupational Safety and Health, etc.

Programmes and Projects: In order to achieve sustainable development, Government is promoting environmental education and public awareness at all levels involving the participation of several local and regional agencies and organizations.

The MIE is coordinating the development of resource materials for teaching of Environmental Studies in primary and secondary schools.

The MCA is currently updating its audio-visual materials for the promotion of environmental education and awareness to a large audience, and in particular the students.

The Ministry of Environment and MIE have established working programmes with SADC/REEP (SADC Regional Environment Education Programme), an agency based at Howick, South Africa to formulate and develop an environmental education policy in Mauritius. The programme also covers networking and training of teachers from primary and secondary institutions.

ARPEGE (“Appui Regional a la Promotion d’une Education pour la Gestion de l’Environnement) is a pilot project initiated by the IOC and aims at promoting environmental education programme within the Indian Ocean Region. The project will focus on the production of teaching materials on environmental education and the training of teachers on such programmes.

Training programmes ranging from four half-days to five full-days are being run at the Occupational Safety and Health Information & Training Centre, and talks on occupational safety and health are delivered on request at the workplaces, in Social Welfare Centres, NGOs, and other associations.

Government is also striving to provide training programme to various small economic sectors such as the planting community, fishermen, and livestock breeders. A piggery remedial project is presently being implemented on a co-operative pig farm. Fishermen grouped in co-operatives are motivated to care for the environment. Government is envisaging training the existing lagoonal sand miners to embark on other economic activities.

A Labour Market Information System (LMIS) has been set up by the Ministry of Training, Skills Development & Productivity to provide information on the education, training and the world of work. This incorporates data on environmental jobs and training opportunities locally and internationally. Besides, the Industrial and Vocational

Training Board (IVTB) has already initiated modules on environment in some of its training programmes. Moreover, the National Productivity and Competitiveness Council (NPCC), while promoting a culture of productivity, is laying emphasis on “Physical Environment and Green Productivity”.

Status: Training programmes are devised and implemented weekly covering the different sectors of the economy. The Labour Market Information System is partially in operation, while being updated regularly. The IVTB constantly reviews its training programmes, through its Advisory Council, so as to meet changing needs of industries. The NPCC is strengthening its campaign to promote productivity.

Information: Information on the labour market, education and the world of work can be obtained from websites of the Ministry of Education & Scientific Research and the Ministry of Training, Skills Development & Productivity. Through these online systems, databases are obtained and are used to estimate the demand and supply of labour force in environmental fields.

Research and Technologies: A Special Committee of the NPCC discuss issues related to the “Green Productivity”. Such activity is a source of information that is being used for promoting a culture of environmental protection as a means of enhancing productivity.

Financing: Both the IVTB and the NPCC are partially financed by the Government and increasing attention to training and education has been given during past years. Activities from the Ministry of Labour & Industrial Relations are financed from yearly budget of the Ministry. The ARPEGE project is financed by the FED (Fond European pour le Developpement).

Cooperation: Mauritius has links with the regional organizations like SADC and IOC on matters related to environmental education and awareness. International organizations such as UNEP and ILO provide the country on a regular basis materials and general information on all environmental issues.

* * *

CHAPTER 37: NATIONAL MECHANISMS AND INTERNATIONAL COOPERATION FOR CAPACITY-BUILDING IN DEVELOPING COUNTRIES

Decision-Making: Sustainable economic growth is difficult to realize if appropriate measures to integrate environmental concerns into economic planning and to build up appropriate capacity to manage effectively the environment are not adopted. However, capacity-building is challenging for Small Island Developing States (SIDS) given the lack of critical mass.

Against this backdrop and, given the difficult international economic environment and constant climatic change, Mauritius is adopting a concerted and holistic approach to reinforce capacity building at all levels to address environmental concerns.

The Ministry of Environment is the leading agency for environmental management in Mauritius. Its role has been streamlined and strengthened to better cope with the negative externalities of the high economic growth registered over the recent years. The Ministry of Training, Productivity and Skills Development, the Ministry of Education & Scientific Research and other institutions such as University of Mauritius have been active at preparing and equipping the Mauritian citizens for the next phase of the country's development. The country is thus engaged in a relentless national effort to reinforce networking among institutions and partners involved in capacity building.

Programmes and Projects: There are a number of initiatives, which are in place to improve capacity building. These include sound human resources development, deepening and broadening of the skills base for environmental management of rationalization of resources and training facilities. Capacity in line Ministries has also been built to ensure that sectoral policies and programmes reflect sound environmental strategy. The Southern African Development Community and the Indian Ocean Commission constitute important platforms for sharing experience and developing new pathways to national and regional partnerships in capacity building efforts.

Status: The report on the National Environmental Strategies for the next decade has underscored the need to sharpen our ability to manage environmental issues across all sectors and activities while strengthening institutions to ensure that legislation and regulations are implemented effectively and rigorously. The programme involves significant investments in training and human resource development. A National Biodiversity Strategy and Action Plan is under preparation and which highlights the need to strengthen institutional capacity in the field of biodiversity.

'An integrated Training strategy for the new millennium' has been formulated to address main issues in the field of training. The new strategy will focus on the employability of the workforce through multi-skilling and retaining programmes in up-coming sectors to address the skills mismatch. In this context, the Industrial and Vocational Training Board is reckoned to play an important role. The Strategy also proposes the creation of a Human Resource Development Council which will help chalking out an appropriate human resource development strategy for the country.

Information: No information available

Research and Technologies: No information available

Financing: Given the fragility and vulnerability of its economy, Mauritius will need sustained support from the international community to reinforce capacity building and address the paucity of expertise in specific areas of environmental management. While a fairly big chunk of national budget is allocated for activities relating to capacity building, external assistance remains sine qua non for the long-term development of the country. Mauritius benefited from training under the auspices of SIDSNET and SIDS Technical Assistance Programme launched under the UN to assist island nations in achieving environmentally sustainable economic development.

The country also benefited from technical assistance from a number of friendly countries to revamp its skill base in areas relating to environmental management. Assistance of UNDP/GEF/UNEP, world Bank, EU and other donor agencies has equally been instrumental in supporting capacity initiatives in the country.

Cooperation: No information available.

* * *

CHAPTER 38: INTERNATIONAL INSTITUTIONAL ARRANGEMENTS

Decision-Making: The Ministry of Environment has been mandated to coordinate activities related to Agenda 21 and sustainable development with other Ministries, parastatal bodies, private sector and NGOs. A National Preparatory Committee chaired by the Ministry of Environment is coordinating activities in the context of the World Summit for Sustainable Development 2002.

The National Environment Commission (NEC) provided under the Environment Protection Act 1991 is the highest level of coordination to discuss and decide on national environmental policies and strategies. It is chaired by the Prime Minister and is attended by several Ministers. The NEC meets at least twice a year. The Cabinet of Ministers, which meets every week, also takes important decisions on environmental matters. Various standing or ad-hoc Committees are held within a few Ministries to discuss and take actions on environmental issues. A few examples are: the Environment Coordination Committee (Ministry of Environment), the National Committee on Climate Change (Meteorological Services), Trade & Environment (Ministry of Foreign Affairs).

Programmes and Projects: Mauritius has since 1999 embarked on its second National Environmental Strategies (NES) for the next decade. Three reports, namely the second National Environmental Action Plan, the second Environmental Investment Programme, and a Review of Legal and Institutional Framework in Mauritius were prepared. Some 19 programmes including 70 activities/projects in the key environmental sectors (land, water, air, solid waste, biodiversity, coastal zone) have been identified for implementation. Other major ongoing projects include the construction of sewage treatment plants and projects falling under the Solid Waste Management Plan.

The Ministry of Environment is presently reviewing and consolidating the Environment Protection act 1991. Other Ministries have promulgated or will be promulgating legislations that are related to the environment. These include the Fisheries and Marine Resources Act 1998, Water Bill, Dangerous Chemicals control Bill, review of the Local Government Act. Although the country has achieved noticeable progress over the past 10 years, a lot more need to be undertaken in various sectors, particularly the management of solid waste and hazardous waste, disposal of sludge and non-compactable waste, etc.

Status: A participatory and consultative mechanism has been put in place involving all stakeholders to discuss and implement issues related to sustainable development.

Capacity-Building, Education, Training and Awareness-Raising: Mauritius is present in various Prepcoms and Inter-Ministerial Meetings on Sustainable Development both at the regional international level. Several activities are held in the country aimed at educating and sensitizing the public at large on environmental issues in the context of World Environment Day and Clean up the World. However, it is viewed that more effort needs to be made for sustaining capacity-building, particularly for the public officers and environmental NGOs. Funding is necessary to allow more participation of Mauritius in the international and regional meetings.

Information: Mauritius is linked via the internet to most international organisations and country agencies on environmental issues. However, no such linkage is available within the country for exchange of information and ideas. Some Ministries have an information system in place, such as the Land Information System (LIS) and the Geographical Information System (GIS). The Ministry of Environment intends to set up an Environmental Information System with links to the other systems.

Research and Technologies: No information available.

Financing: Most projects and programmes falling under the second Environment Investment Programme are being financed from Government funds. Projects under the Sewerage Master Plan and Solid Waste Management Plan are financed by the World Bank.

Cooperation: Mauritius cooperates with mainland Africa especially with the southern and eastern areas, through meetings and seminars. Mauritius participated in several preparatory meetings for World Summit for Sustainable Development (WSSD) 2002 in South Africa. Mauritius has hosted the SADC Sub-Regional Consultations in preparation for the WSSD 2002.

* * *

CHAPTER 39: INTERNATIONAL LEGAL INSTRUMENTS AND MECHANISMS

[Note: This issue has also been covered under *Cooperation* in various chapters of this Country Profile.]

Decision-Making: The Government of Mauritius remains the sole decision-maker for signing, ratifying or adhering to a particular international environmental convention or agreement. Various Ministries and public authorities act as the implementing agencies for the conventions or multilateral agreements, as indicated in the table below –

	Conventions/Agreements	Status	Responsible Ministry
1.	African convention on Conservation of Nature and Natural Resources 1968		
2.	Agreement for the Establishment of the Indian Ocean Tuna Commission		
3.	Agreement on the Organisation for Indian Ocean Marine Affairs		
4.	Agreement relating to the Implementation of Part XI of UNICLOS 1996		
5.	Amendment to the Montreal Protocol (Copenhagen) 1992	30.11.93 (R)	MoE
6.	Amendment to the Montreal Protocol (London) 1990	30.11.93 (R)	MoE
7.	Amendment to the Montreal Protocol (Montreal) 1997		
8.	Amendment to the Montreal Protocol (Beijing)		
9.	Convention for the Protection of the World Cultural and Natural Heritage 1972		
10.	Convention for the Regulation of Whaling 1946	17.6.83 (Eif)	MANR
11.	Convention for the Safety of Life at Sea (SOLAS) 1974	01/05/88 (Eif)	PMO
12.	Convention of Biological Biodiversity 1992	17.8.92 (R)	MANR
13.	Convention on Civil Liability for oil Pollution Damage (CLC) 1969 and Protocol of 1976	05/07/95 (Eif)	PMO
14.	Convention on Fishing and Conservation of the Living Resources of the High Seas 1958	04/11/70 (Eif)	MANR
15.	Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) 1973	28/04/75 (R)	MANR
16.	Convention on Load Lines 1966	11/01/89 (Eif)	PMO
17.	Convention on Standards of Training and Certification of watch Keepers (STCW) 1978	04/10/91 (Eif)	PMO
18.	Convention on the control of Transboundary Movements of Hazardous Wastes and their disposal (BASEL) 1989	24/11/92 (R)	MOE
19.	Convention on the establishment of an International Fund for compensation for Oil Pollution Damage (FUND) 1971 and Protocol of 1976	05/07/95	PMO
20.	Convention on the High Seas 1958	12/03/68	PMO
21.	Convention on the International Regulations for preventing Collisions at sea 1972	26/09/89 (Eif)	PMO
22.	Convention on the Prevention of Pollution from Ships 1973/78	05/07/95 (Eif)	PMO
23.	Convention on the Ban of the Import into Africa and the control of Transboundary, Movement of Hazardous Wastes within Africa	29/10/92 (R)	MOE

24.	Convention on the Prohibition of Military or any other hostile Use of Environment Modification Techniques 1977.		
25.	Convention on the Protection of the Ozone Layer (Vienna) 1985	18/8/92 (A)	MOE
26.	Convention on Wetlands of International Importance Especially as waterfowl habitat (Ramsar) 1971	24/03/97 (S)	
27.	Convention to combat drought and Desertification in those countries experiencing Drought and Desertification, particularly in Africa 1995	11/01/96 (R)	
28.	General Tariffs and Trade (GATT) 1947		
29.	Plant protection Convention 1971		
30.	Protocol on Substances that deplete the Ozone Layer (Montreal) 1987	18/8/92 (R)	MOE
31.	Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and under water 1963		
32.	Treaty on the Emplacement of Nuclear Weapons and other Weapons of Mass Destruction on the Sea Bed and the Ocean Floor and in the Subsoil there of 1971		
33.	UN Framework Convention on Climate Change 1992	17/08/92 (R)	MOE
34.	United Nations Convention on the Law of the Sea (UNCLOS) 1982	10/12/82 (S)	MOE
35.	Convention on the Territorial Sea and Contiguous Zone 1958		
36.	Oil Spill Preparedness and Readiness Convention 1997	(S)	
37.	Cartagena Protocol on BioSafety		
38.	Convention for the Protection, Management and Development of the Marine and Coastal Environment in the Eastern African Region and Related Protocols (Nairobi Convention)	10.07.00 (R)	
39.	Stockholm Convention on Persistent Organic Pollutants	23.05.01 (S)	

MOE – Ministry of Environment; MANR- Ministry of Agriculture and Natural Resources; PMO- Prime Minister's Office

(S) – Signed; (R) – Ratified; (Eif) – Entry into force

Programmes and Projects: Mauritius has signed or ratified many Agreements and Conventions concerning environment. Various Ministries and parastatal bodies have executed, or are currently executing, programmes and projects falling under these Agreements and Conventions. The Ministry of Environment has prepared the National Environmental Strategies (NES) for the next decade in 1999. The NES Report comprises the second National Environmental Action Plan (NEAP 1) and the second Environmental Investment Programme (EIP 2), which earmarks around 70 projects and activities.

Mauritius has successfully undertaken projects under the Montreal Protocol to reduce CFCs and ODS substances. The country will phase out completely such substances by 2005.

Other projects falling under the Climate Change Convention or the Kyoto Protocol have been executed.

Status: Please refer to the table indicating the status of Mauritius in relation to the international environmental conventions and multi-lateral agreements.

Capacity-Building, Education, Training and Awareness-Raising: Mauritius has benefited from provisions made under the international conventions or agreements, such as the Montreal Protocol, Kyoto protocol, Basel Convention, etc. for capacity-building and training of Government officials and private sector. In addition, Mauritius has participated in several international and regional meetings at the various stages of the development of the Convention or protocol. Education, training and awareness-raising of local stakeholders are carried out through workshops and seminars.

Information: Each focal point for the above Conventions and Agreements receive information directly from the international or regional agencies and through internet.

Research and Technologies: No information available.

Financing: The EIP 1 projects have been partly financed by loans from the World Bank and other foreign banks. Government is financing EIP 2 projects. Funds are also obtained from international agencies to implement projects or programmes falling under the Convention or Agreement. UNDP GEF/SGP grants allocation to NGOs and CBOs to a maximum of US \$ 50,000 per project.

* * *

CHAPTER 40: INFORMATION FOR DECISION-MAKING

Decision-Making: In Mauritius considerable effort is made to collect and analyse information for sustainable development. The Central Statistics office under the aegis of the Ministry of Economic Development, Financial Services and Corporate Affairs is the main agency for overall data collection in the country. These information pertain to Social and Economic aspects. Population Census is carried out every ten years and Gross Domestic Products are calculated on an annual basis. This Agency has various units attached to Key Ministries for coordination works and data collection in the specific fields. The Central Statistics Office publishes data on a quarterly and annual basis for dissemination to the various sectors.

Programmes and Projects: The National Environmental Strategies for the next decade which is under implementation since July 2000 has prescribed within its investment programme (EIP2), a set of projects for the development of information systems for sustainable development, for example the Environment Information System, Environmental Indicators and the Land Information System.

Status: Data on Water quality monitoring are available from the Central Water Authority, the National Environmental Laboratory and the Ministry of Fisheries. These data need to be processed and analyses need to be carried out within a time scale. A Statistical Unit attached to the Ministry of Environment is presently compiling all the information for analyses and publication. Additionally data on air quality and flora and fauna are presently compiled for processing and analysis and an inventory of Green House Gas emission has just started.

Capacity-Building, Education, Training and Awareness-Raising: Training facilities for data collection and processing are rather inadequate. There are only few opportunities available for training abroad in this specific field. It is high time to start the process of Natural Resources Accounting.

Information: The aim of the Environmental Information System is to ensure that information needed for rational Decision-Making is available to the people making the choice. This information should be centralized and made available to decision makers (Government Agencies, Private Sector and individuals). Land Mapping and Remote Sensing are respectively carried out by the Ministry of Housing and Lands and the Remote Sensing Unit of the Ministry of Agriculture, Food Technology and Natural Resources. Access to information and networks (Internet) is reasonably easy and at relatively low cost.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: No information available.

* * *

CHAPTER: INDUSTRY

Decision-Making: No information available.

Programmes and Projects: No information available.

Status: No information available.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: No information available.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: No information available.

* * *

CHAPTER: SUSTAINABLE TOURISM

Decision-Making: No information available.

Programmes and Projects: No information available.

Status: No information available.

Capacity-Building, Education, Training and Awareness-Raising: No information available.

Information: No information available.

Research and Technologies: No information available.

Financing: No information available.

Cooperation: No information available.

* * *