

JaNEAP

2007

Status Report

Pursuing Sustainable Development - the environmental action agenda



National Environment and Planning Agency
An Agency of the Ministry of Health and Environment

Jamaica's National Environmental Action Plan (JaNEAP)

2007 Status

Published by:
The National Environment and Planning Agency (NEPA)
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TABLE OF CONTENTS

List of Acronyms	iii
Preface	v

The Environmental Action Agenda

1. The Governance Framework and Environmental Stewardship	1
A. Institutions, Policies and Legislation	1
B. Environmental Awareness	3
C. Mainstreaming Gender & Public Participation into Environmental Management	4
D. Enforcement and Compliance	5
E. Natural Resources Accounting	5
F. Environmental Assessments	6
G. Monitoring Environmental and Sustainable Development Indicators	8
2. Environmental Management Systems (EMS)	9
A. EMS in the Government/Public Sector	9
B. EMS in the Private Sector/Industries	11
C. Green Consumerism and Demand Side Management	12
3. Waste Management	13
A. General Waste Management	13
B. Solid Wastes	15
C. Industrial Effluents, Hazardous Wastes and Toxic Chemicals	18
D. Sewage Management	20
4. Environmental Health	22
5. Protection of the Atmosphere	25
A. Air Quality	25
B. Ozone Depleting Substances	26
6. Freshwater Resources: Development/Management/Use	27
7. Land Resources: An Integrated Approach to Planning and Management	30
A. Development Plans and Orders	30
B. Land Administration	31
C. Human Settlements	32
D. Land Information Systems	33
8. Conservation of Biological Resources	35
9. Protected Areas	37

10. Forestry and Watershed Management	41
11. Oceans, Seas and Coastal Resources	45
12. Sustainable Agriculture and Rural Development	51
13. Tourism and the Environment	53
14. Energy Resources/Alternative Energy	55
15. Natural and Environmental Disasters	58
A. Land Management and Hazard Mitigation	58
B. Climate Change and Sea Level Rise	61
C. Oil Spills	62
16. Multi-lateral Environmental Agreements	63

APPENDIX A – List of Participating Agencies/Institutions

LIST OF ACRONYMS

BOD	Biological Oxygen Demand
CBO	Community Based Organization
CDM	Clean Development Mechanism
CESTO	Caribbean Environmental Sustainable Tourism Organization
CFCs	Chlorofluorocarbons
CMS	Centre for Marine Sciences
CPACC	Caribbean Planning and Adaptation to Climate Change
CIDA	Canadian International Development Agency
CITES	Convention on International Trade in Endangered Species (of Wild Fauna and Flora)
CO	Cabinet Office
CPC	Chief Parliamentary Council
CWIP	Coastal Water Quality Improvement Project
EEPI	Environmental Economic Policy Instruments
EEZ	Exclusive Economic Zone
EFJ	Environmental Foundation of Jamaica
EIA	Environmental Impact Assessment
EMS	Environmental Management Systems
ENACT	Environmental Action Programme
ENGO	Environmental Non-Governmental Organization
FAO	Food and Agriculture Organization
FCCC	Framework Convention on Climate Change
FD	Fisheries Division of Ministry of Agriculture and Lands
GEF	Global Environment Facility
GIS	Geographic Information System
GOJ	Government of Jamaica
HACCP	Hazard Assessment and Critical Control Point analysis
ICENS	International Centre for Environmental & Nuclear Sciences
ICRI	International Coral Reef Initiative
IDB	Inter-American Development Bank
IPM	Integrated Pest Management
ISO	International Organization for Standardization
JaNEAP	Jamaica National Environmental Action Plan
JASPEV	Jamaica Social Policy Evaluation
JBI	Jamaica Bauxite Institute
JBS	Jamaica Bureau of Standards
JCDT	Jamaica Conservation Development Trust
JCRAP	Jamaica Coral Reef Action Plan
JNHT	Jamaica National Heritage Trust
JNPTF	Jamaica National Park Trust Fund
JPSCo	Jamaica Public Service Company Limited
JSDNP	Jamaica Sustainable Development Network Programme
KMA	Kingston Metropolitan Area
KMR	Kingston Metropolitan Region
LAMP	Land Administration and Management Project
LIS	Land Information System
LTIS	Land Titling Information System
MARPOL	International Convention on the Protection of Pollution from Ships
MBMP	Montego Bay Marine Park
MEA	Multi-lateral Environmental Agreement
MIND	Management Institute for National Development
MEM&T	Ministry of Energy Mining and Telecommunications

MH&E	Ministry of Health and Environment
MPM	Metropolitan Parks & Markets
MTSF	Medium Term Socioeconomic Framework
NBSAP	National Biodiversity Strategy & Action Plan
NCST	National Commission on Science and Technology
NCRPS	Negril Coral Reef Preservation Society
NEEAPSD	National Environmental Education Action Plan for Sustainable Development
NEPA	National Environment and Planning Agency
NEEC	National Environmental Education Committee
NEST	National Environmental Societies Trust
NEPT	Negril Environmental Protection Trust
NHDC	National Housing Development Corporation
NFAP	National Forestry Action Plan
NGOs	Non-Governmental Organizations
NLA	National Land Agency
NRCA	Natural Resources Conservation Authority
NSDF	National Sustainable Development Framework
NSWMA	National Solid Waste Management Authority
NWC	National Water Commission
OAS	Organization of American States
ODPEM	Office of Disaster Preparedness and Emergency Management
ODS	Ozone Depleting Substances
Operation PRIDE	Programme for Resettlement and Integrated Development Enterprise
PAHO	Pan America Health Organization
PCJ	Petroleum Corporation of Jamaica
PIOJ	Planning Institute of Jamaica
PM10	Particulate Matters 10 microns
PSOJ	Private Sector Organization of Jamaica
RADA	Rural Agricultural Development Authority
SD	Sustainable Development
SPAW	Specially Protected Areas and Wildlife
STATIN	Statistical Institute of Jamaica
STP	Sewage Treatment Plant
TPDCo	Tourism Product Development Company
UDC	Urban Development Corporation
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
USAID	United States Agency for International Development
UTECH	University of Technology
UWI	University of the West Indies
WHO	World Health Organization
WRA	Water Resources Authority (formerly Underground Water Authority)

PREFACE

The Jamaica National Environmental Action Plan (JaNEAP) 2006 – 2009 is the Government of Jamaica's 3-Year strategic action plan to address environmental and physical planning issues.

The JaNEAP 2006 – 2009 represents a comprehensive update of the Actions outlined in the previous JaNEAP 1999 – 2002 and is consistent with new policy priorities of the Government.

JaNEAP 2007 Status Report provides information on accomplishments to date in respect of the Actions outlined in JaNEAP 2006 – 2009.

Progress has been reported on ninety one (91) of the one hundred and seventy one (171) Actions. While achievements have occurred with respect to most of the other Actions, formal reports are outstanding. As can be expected, the 2008 Status Report will provide a more complete record of these Actions.

The JaNEAP publications are intended to be used:

1. As an information tool to inform the wider public of the actions taken, and actions to be taken by the Government of Jamaica to address environmental issues.
2. As a planning tool by the Public Sector, Funding Agencies, Private Sector, NGOs and CBOs.
3. As a monitoring tool by NEPA.

The JaNEAP is distributed in hard copy to Public Sector Agencies and Ministries and is posted at <http://www.nepa.gov.jm>. It is also available at the NEPA Documentation Centre for reference.

THE ENVIRONMENTAL ACTION AGENDA

1. THE GOVERNANCE FRAMEWORK and ENVIRONMENTAL STEWARDSHIP

GOAL: Improved institutional arrangements for environmental governance and conservation

Indicators

Indicator	Source of Data
National Sustainable Development Strategy	PIOJ
Number of public consultations related to Environmental Impacts	NEPA
Number of public environmental awareness contacts by NEPA (PSAs, Exhibitions etc)	NEPA
Percentage of environmental regulatory violations that are prosecuted	NEPA
Expenditure on Environmental Management as a Percentage of GDP	STATIN
Number of Policies subjected to a Strategic Environmental Assessment (SEA)	Cabinet Office
Number of EIAs per sector as against approved developments	NEPA

ACTIONS FOR 2006 - 2009

A. INSTITUTIONS, POLICIES AND LEGISLATION

Action #1.1

The Cabinet Office in collaboration with the PIOJ, MH&E and NEPA will develop a National Sustainable Development Framework.

2007 Report

The PIOJ is spearheading the development of Jamaica 2030 National Development Plan – a 25-year plan designed to put Jamaica in a position to achieve developed country status by 2030. Vision 2030 is based on a fundamental vision to make Jamaica *‘the place of choice to live, work, raise families, and do business,’* and on guiding principles which put ‘people’ at the centre of Jamaica’s transformation.

The preparation of the Plan will be supported by a quantitative systems dynamics model – Threshold 21 (T21) – which supports comprehensive, integrated planning that would enable the consideration of a broad range of interconnected factors along economic, social and environmental considerations and will be used to project future consequences of different strategies across a whole range of indicators. In addition, it

will enable planners to trace causes of changes in any variable or indicator back to the assumptions. The Plan is expected to be completed by the 3rd quarter of 2008.

Action #1.2

The Cabinet Office will implement appropriate measures to ensure that it has access to adequate information to facilitate informed decision-making in relation to matters that impact the environment and/or are impacted upon by the environment. The Cabinet Office's management of the Natural Resources Committee of Cabinet will play a pivotal role in this regard.

2007 Report

The Cabinet Office undertook a review of the Strategic Environmental Assessment (SEA) Policy and held meetings with specific Ministries regarding the implementation of the Policy.

Action #1.3

NEPA will continue to strengthen the Applications Processing System in order to provide an efficient service to clients submitting environmental and planning applications.

2007 Report

NEPA continues to receive an increasing number of applications. Approximately two thousand eight hundred and ninety one (2891) applications were received last year (2006-2007). Of this number, two thousand three hundred and eighty one (2381) were processed. Fifty five percent (55%) of these applications were processed within ninety (90) days.

A number of initiatives have been implemented to enhance service delivery in the applications review process. The process has been reviewed to meet critical path criteria, and additional staff and equipment have been retained. Over Financial Year 2007-2008 NEPA will spend twelve million dollars (J\$12,000,000.00) on the upgrading and customization of the Automated Application Management System (AMANDA) to enable clients to have direct online access in tracking their applications. This is, as the Agency continues to focus on improving the process to ensure the effective and timely delivery of its services.

B. ENVIRONMENTAL AWARENESS

Action # 1.4

NEPA will continue its routine programme of public education and outreach through regular press releases, maintenance of an environmental calendar, staging various exhibitions and giving talks on the environment to schools, communities and groups.

2007 Report

NEPA's public education and awareness activities increased significantly during the year 2006-2007. The Agency was involved in fifty two (52) exhibitions, a fifty percent increase over last year and staff participated in fifty nine (59) media interviews. This also represents a fifty percent increase over the previous year. The number of public presentations and public service announcements also increased significantly.

Action #1.5

In compliance with the Access to Information Act, NEPA will ensure that all information on EIAs is made available to the general public.

2007 Report

An EIA document database was created and is housed in NEPA's Documentation Centre. EIAs are also now routinely posted on NEPA's website. Additionally, public advertisements are routinely placed in the print media indicating the location for viewing EIAs.

Action # 1.6

The Ministry of Education in collaboration with NEPA will implement the National Environmental Education Action Plan for Sustainable Development (NEEAPSD).

2007 Report

The National Environmental Education Action Plan for Sustainable Development [NEEAPSD – Action Plan] was spearheaded by the National Environmental Education Committee (NEEC), with the involvement of the Ministry of Education and Youth (MoEY) as one of its core members.

The Action Plan is for the period 1998 – 2010 with actions expected in five (5) programme areas, with the MoEY having responsibility – as Lead Agency Focal Point – for the two (2) programme areas of *Teacher Professional Development* and *Curriculum Development and Implementation*. A report on the achievements to date in these two areas has been prepared.

C. MAINSTREAMING GENDER & PUBLIC PARTICIPATION INTO ENVIRONMENTAL MANAGEMENT

Action #1.7

The Government will ensure that all Cabinet Submissions have been analysed for gender considerations.

2007 Report

A report on this action is not available.

Action # 1.8

The Government, spearheaded by the Cabinet Office will implement the Consultation Code of Practice for the Public Sector.

2007 Report

The Consultation Code of Practice for the Public Sector was finalized and made available to Government Ministries for guidance.

Action #1.9

NEPA will implement the EIA guidelines for public participation at public meetings to discuss EIAs.

2007 Report

Public meetings for the presentation of EIAs are being conducted based on the EIA guidelines for public participation. Reports of these meetings are available from NEPA.

D. ENFORCEMENT AND COMPLIANCE

Action #1.10

NEPA will develop and implement a Multi-Agency Enforcement Strategy and will increase and strengthen post-permit/approval monitoring to ensure greater compliance.

2007 Report

Three hundred and nine (309) enforcement actions were taken during 2006-2007. Four individuals were charged in the Resident Magistrate's Court for breaches of the Wildlife Protection Act. They were fined amounts ranging from ten thousand dollars (J\$10,000) to sixty thousand dollars (J \$60,000).

The Agency also continued its focus on post-permit monitoring, as it sought to encourage compliance with the conditions set out in the Permits and Licences granted.

There were two thousand, three hundred and seventy seven (2,377) routine monitoring visits and two thousand, one hundred and twenty one (2,121) post-permit compliance monitoring visits.

E. NATURAL RESOURCES ACCOUNTING

Action # 1.11

NEPA will develop a process of incorporating resource valuation into decision making.

2007 Report

Action has not yet been taken.

Action # 1.12

NEPA will encourage the use of incentives to promote the sustainable management of ecosystem services.

2007 Report

An integrated watersheds and coastal area management (IWCAM) project (started in October 2006) being implement in the Driver's River Watershed in Portland is aiming to use incentives as a strategy to support sustainable watershed practices. Lessons learned will be applied nationally.

Action # 1.13**STATIN will prepare a Report on the Environment Protection Expenditure Survey.**2007 Report

Environment protection refers to actions and activities where the main purpose is to protect the environment from pollution caused by enterprises or industries. Environment Protection Expenditure (EPE) is the cost undertaken in order to reduce, treat or eliminate any pollution or other degradation to the environment which may be caused by the activities of the enterprise.

An EPE survey was conducted during 2005 for the financial year 2004. Questionnaires were delivered to a total of 200 enterprises in the food and drink, chemical, mining and quarrying and hotel industries.

The report was prepared in 2006 and will be published in the 2007 State of the Environment report.

F. ENVIRONMENTAL ASSESSMENTS**Action #1.14****Cabinet Office will facilitate and monitor implementation of the Strategic Environmental Assessment (SEA) Policy.**2007 Report

See Action 1.2.

Action #1.15**NEPA will review the EIA process on a regular basis to ensure that the process is efficient whilst meeting the objectives of sustainable development. NEPA will continue to request EIAs for proposed developments in sensitive areas and/or those**

which might have significant negative impacts on the environment. The precautionary principle will be applied and the Agency will insist on improved standards in conducting EIAs.

2007 Report

NEPA is continuously reviewing the EIA process. Discussions have started regarding the certification of consultants who prepare EIAs. Between 2000 – 2006, two hundred and fourteen (214) EIAs were received and reviewed by NEPA. Most EIAs were in the following categories:

1. Housing developments
2. Hotel developments
3. Sewage treatment and disposal
4. Expansion to bauxite mining ,storage and disposal facilities
5. Ethanol plants
6. Submarine fibre optic cable
7. Incinerators

Action #1.16

The Cabinet Office will refine the environmental checklist developed under both the Environmental Action Programme (ENACT) and the Jamaica Social Policy Evaluation (JASPEV) Project and use it to assess the adequacy of environmental considerations in Cabinet Submissions. This checklist will be of particular relevance in instances where the SEA Policy does not apply.

2007 Report

A report on this action is not available.

G. MONITORING ENVIRONMENTAL AND SUSTAINABLE DEVELOPMENT INDICATORS

Action # 1.17

The Government, through the Cabinet Office and the PIOJ will develop sustainable development indicators and will use these indicators to monitor Jamaica's progress towards achieving sustainable development.

2007 Report

The PIOJ will finalize national indicators as part of the Jamaica 2030 National Development Plan process. See Action 1.1.

Action #1.18

NEPA will establish environmental indicators and will report on these in a State of the Environment (SOE) Report prepared in collaboration with the Statistical Institute of Jamaica (STATIN). A SOE will be prepared for 2007 and a Pocketbook of Environment Statistics in 2008.

2007 Report

During 2006-07 data collection and research on the topics for the chapters of the SOE commenced. Efforts are also being made to close some data gaps noted while preparing previous publications.

In July 2007 a representative from STATIN attended a workshop on water accounting, held in the Dominican Republic, to acquaint countries in the Caribbean and Central America with the techniques involved in environmental-economic accounting on water.

2. ENVIRONMENTAL MANAGEMENT SYSTEMS (EMS)

GOAL: A high standard of environmental stewardship and practice is achieved within the private and public sectors and by consumers

Indicators

Indicator	Source of Data
Number of Government Ministries/Agencies with environmental stewardship/environmental management programmes	NEPA/Cabinet Office
Number of ISO14001 certified companies	JBS
Number of companies with Environmental Management Systems	JBS
The number of persons trained in Environmental Management Systems	NEPA/MIND/JBS
The number of Demand Side Initiatives	MEMT

ACTIONS FOR 2006 – 2009

A. EMS IN THE GOVERNMENT/PUBLIC SECTOR

Action # 2.1

The Government through the MH&E will implement the GOJ Environmental Stewardship Policy and Guidelines and build the capacity of Ministries and Agencies to incorporate environmental stewardship concepts into Government operations.

2007 Report

The Ministry reviewed the Stewardship Policy and has had discussions with selected Government Departments and Agencies. The document will shortly be submitted to Cabinet.

Action # 2.2

The Government will provide capacity development training in ISO 14000 and HACCP.

2007 Report

A report on this action is not available.

Action # 2.3

The Bureau will develop and implement an ISO 14000 Certification Programme and aim for extensive implementation in the public sector.

2007 Report

A report on this action is not available.

Action # 2.4

MIND will offer training courses in support of the Greening of Government Programme to include EMS, Environment and Sustainable Development, Strategic Environmental Assessment and Integrated Environmental Management and Planning.

2007 Report

A report on this action is not available.

Action # 2.5

PCJ will obtain ISO 14000 certification. The company will adopt a policy of sound environmental management to ensure the well-being of its employees, the public and the environment.

2007 Report

The PCJ is in the process of formalizing an environmental management system based on the requirements of ISO 14000. This system will be implemented throughout the group and tailored to the individual needs of the subsidiaries.

Action # 2.6

The Bureau will develop and implement an ISO 14000 Certification Programme and aim for extensive implementation in the private sectors.

2007 Report

A report on this action is not available.

B. EMS IN THE PRIVATE SECTOR/ INDUSTRIES

Action # 2.7

JPSCo will incorporate the most appropriate environmental protection technology for new projects and equipment and will comply with the requirements of national

regulatory agencies and donor agencies for the rehabilitation of old units. The company will engage in environmental self-examination through periodic reviews, assessments and audits.

2007 Report

A report on this action is not available.

Action # 2.8

NEPA, through the Blue Flag Programme will continue to promote the use of EMS for beaches and marinas.

2007 Report

NEPA continued its role as National Coordinator for the Blue Flag Programme in Jamaica. Five facilities were awarded Blue Flag (an international eco-label) designation in 2004. The five awardees are Doctors Cave Beach, Norman Manley Sea Park, Merrills' Beach Resort, Port Antonio Marina Beach and the Port Antonio Marina. This is a significant achievement as Jamaica received five out of the twelve Blue Flag Certification awards given to the Caribbean Region for the first time in 2004.

The Negril Environmental Protection Trust (NEPT) was selected to be the National non-governmental organization to operate the Blue Flag Programme in Jamaica. NEPA will embark on a three year transition phase during which time the capacity of NEPT will be built to enable this organization to administer the programme in Jamaica.

C. GREEN CONSUMERISM AND DEMAND SIDE MANAGEMENT

Action # 2.9

Demand Side Management (DSM) programmes will be developed for the power sector. The objectives of these programmes will be clearly specified and the institutional arrangements are to be set out in DSM policy guidelines.

2007 Report

A report on this action is not available.

Action # 2.10

Government will provide incentives for the use of energy efficient products.

2007 Report

A report on this action is not available.

Action # 2.11

The Energy Efficiency Building Code (EEBC) will be promulgated and enforced.

2007 Report

A report on this action is not available.

Action # 2.12

A concessionary tax structure will be developed to encourage the use of solar panels and tubes for water heating, and solar systems designed to produce electricity.

2007 Report

A report on this action is not available.

3. WASTE MANAGEMENT

GOAL: The sustainable use of raw materials and the prevention of pollution and contamination through the implementation of waste reduction, recycling and reuse strategies, and improved waste management.

Indicators

Indicator	Source of Data
Generation of industrial and municipal solid waste	NSWMA
Collection coverage (%) (solid waste)	NSWMA
Generation of hazardous waste	NSWMA
Sweeping coverage (%)	NSWMA
Tonnage of waste brought to the disposal site (broken out by type)	NSWMA
Rate of waste recycling and reuse	NSWMA
Percentage of population connected to sewerage systems	NWC
Number of Sewage Treatment Plants that meet NRCA's sewage effluent standard	NEPA

ACTIONS FOR 2006 – 2009

A. GENERAL WASTE MANAGEMENT

Action # 3.1

The Ministry of Health and Environment through the Ministry of Finance and Public Service will introduce an Environmental Levy on imported goods. The tax collected will be used to implement waste management initiatives.

2007 Report

The Ministry of Finance and Planning imposed a 0.5% environmental levy on all imports effective June 1, 2007.

Action # 3.2

The Ministry of Health and Environment will pursue options for the sale of carbon credits on waste minimization initiatives.

2007 Report

Discussions have been ongoing regarding credit sales for various projects under the clean development mechanism (CDM) of the Kyoto Protocol.

Action # 3.3

The National Solid Waste Management Authority will complete all required regulations for the operation of the National Solid Waste Management Act.

2007 Report

A report on this action is not available.

Action # 3.4

The NSWMA will assist in devising cost recovery mechanisms by promoting recycling and reuse initiatives for proper disposal of solid wastes.

2007 Report

A report on this action is not available.

Action # 3.5

NEPA will implement the Wastewater and Sludge Regulations, including the Discharge Fees component.

2007 Report

The draft Regulations were reviewed by the CPC. The formula for calculating the Discharge Fees was also included. These Regulations are expected to be gazetted in 2008.

Action # 3.6

NEPA will develop and administer a Pollutant Release and Transfer Register (PRTR).

2007 Report

NEPA has started work on developing the database that will support the PRTR.

B. SOLID WASTES

Action # 3.7

The Government will take steps to increase the capacity of the NSWMA.

2007 Report

A report on this action is not available.

Action # 3.8

Kingston Restoration Company Limited will work with downtown Kingston communities under a Sanitation and Neighbourhood Clean-up/Maintenance Programme to improve solid waste management, sanitation and beautification within these communities.

2007 Report

A report on this action is not available.

Action # 3.9

The NSWMA will continue its Environmental Management programme at the Riverton Disposal Site, and will install environmental monitoring programmes at other disposal sites island-wide.

2007 Report

A report on this action is not available.

Action # 3.10

The NSWMA will educate/sensitize the public, especially schools, communities, staff and the general public, on solid waste collection, disposal and management issues.

2007 Report

A report on this action is not available.

Action # 3.11

The National Solid Waste Management Authority will implement a Code of Practice for the recovery of recyclables, and will provide legal support in the development of recycling programmes.

2007 Report

A report on this action is not available.

Action # 3.12

The NSWMA will assist in the formalization of the Solid Waste Sector through the development of licensing regulations, standards and procedures for applicants.

2007 Report

A report on this action is not available.

Action # 3.13

The NSWMA will continue to provide collection services for informal communities situated along gullies and riverbanks. In addition, the Authority will focus on providing garbage receptacles in all public areas.

2007 Report

A report on this action is not available.

Action # 3.14

The NSWMA will rationalize disposal site locations and improve site operations in the long term. Plans are afoot to find a suitable location for the Doctors Wood Disposal Site, which will eventually be closed because of its potential to create negative coastal impacts.

2007 Report

A report on this action is not available.

Action # 3.15

The Ministry of Health and Environment will address the problem of non-biodegradable waste such as plastic bottles and styrofoam containers by creating

an incentive framework for manufacturers/distributors who employ creative strategies to get the public to return these containers to source.

2007 Report

The Ministry will encourage manufacturers/distributors/retailers to, where possible, utilize biodegradable and/or recyclable packaging. Consumers will also be sensitized to the benefits to both human health and the environment from the utilization of this kind of packaging.

Companies that operate deposit refund or return schemes will be encouraged to continue to implement such schemes.

Action # 3.16

The NSWMA, through its imminent licensing system, will monitor waste management operations and the trade of waste locally and internationally. They will also research the “Best Available Technology” related to sweeping, collection, transportation and disposal of solid waste.

2007 Report

A report on this action is not available.

Action # 3.17

The NSWMA will continue to pursue options to divest the collection of solid wastes and solid waste disposal sites to the private sector in 5 to 10 years.

2007 Report

A report on this action is not available.

C. INDUSTRIAL EFFLUENTS, HAZARDOUS WASTES AND TOXIC CHEMICALS

Action # 3.18

The NSWMA will improve the development of disposal sites island-wide, and will establish procedures to facilitate the disposal of Hazardous and/or Special Wastes.

2007 Report

A report on this action is not available.

Action # 3.19

The MH&E will advocate for policy development and approval for the management/treatment of e-waste and hazardous wastes, especially used lead acid batteries (ULABs), cell phone batteries, and computers. A hazardous substances and hazardous waste management policy will be developed.

2007 Report

The Ministry has had several consultations with the relevant public sector agencies and the lead acid battery distribution/retail sector on the development of a sustainable National Programme for the environmentally sound management of used lead acid batteries. One component of this Programme will be the development of legislation to govern the recovery of ULAB from the market place. It is anticipated that this legislation will be in place by the end of the 2007/8 financial year.

National Programmes to govern the environmentally sound management (ESM) of used and end-of-life mobile phones and accessories as well as computing wastes will be developed and implemented during the 2007/8 financial year. It is anticipated that a Policy will be developed to address the ESM of computing equipment wastes.

Work is ongoing on the development of the Hazardous Substances and Hazardous Wastes Management Policy. A preliminary draft of the Policy has been prepared and will be disseminated to a small consultative group of public/private sector stakeholders for comments.

Action # 3.20

NEPA will establish a fee structure based on the quantity and quality of discharge of industrial effluents discharged.

2007 Report

The fee structure has been developed and incorporated into the draft sewage and sludge regulations.

Action # 3.21

NEPA will establish guidelines and codes of practice for at least two industrial sectors each year. Industries will be asked to submit their action plans for compliance and these action plans will be monitored.

2007 Report

Action has not yet been taken.

Action # 3.22

NEPA will conduct verification monitoring visits to at least 70 industrial locations annually.

2007 Report

Over one hundred monitoring visits were made to industrial facilities during the year 2006-2007. The upcoming year will see an increase in the number of inspection visits to these facilities.

Action # 3.23

The Pesticide Control Authority will implement a programme to regulate the sellers and users of restricted pesticides.

2007 Report

A report on this action is not available.

Action # 3.24

The Pesticide Control Authority will maintain a register of pesticides imported and manufactured locally.

2007 Report

A report on this action is not available.

D. SEWAGE MANAGEMENT

Action # 3.25

Through the NPA for Protection of the Coastal and Marine Environment from LBS/LBA, Government will review and revise the policy, legal and institutional framework to effectively manage the implementation and operation of sewage solutions, and will especially introduce a certification and licensing programme for sewage treatment plant operators.

2007 Report

Action has not yet been taken.

Action # 3.26

The National Water Commission (NWC) will undertake a study of the costs of sewerage services and review its tariff structure with a view to recovering those costs.

2007 Report

The study and tariff review has been completed; however a report on the assessment is not yet available.

Action # 3.27

Government will seek to develop public/private partnerships in the management of sewerage works.

2007 Report

A public/private sector approach has been taken with respect to the construction and operation of the new municipal sewerage works constructed for the KMA at Soapberry.

Action # 3.28

The NWC will pursue a public participatory model for improved wastewater system management in the municipal sewerage districts.

2007 Report

A report on this action is not available.

Action # 3.29

A new sewerage system will be established for the KMA.

2007 Report

A new municipal sewage treatment plant is being built for the KMA.

Action # 3.30

The NWC will embark on a three (3) year sewage rehabilitation, operation & maintenance programme to enable existing sewage treatment systems to function at the level to which they were originally designed. The rehabilitation plan will be monitored by NEPA.

2007 Report

A report on this action is not available.

4. ENVIRONMENTAL HEALTH

GOAL: Environmental health, improved sanitation and environmental quality of life for the population

Indicators

Indicator	Source of Data
Percentage of population with access to safe drinking water	STATIN
Percentage of population with improved sanitation	STATIN
Percentage of concentration of faecal coliform in fresh water	NEPA/NWA
Number of incidences of respiratory tract infection caused by Air Pollution	MH&E
Number of incidents of lead poisoning	STATIN

ACTIONS FOR 2006 - 2009

Action # 4.1

The MH&E will reduce and /or control vectors of public health significance, through the application of appropriate source reduction activities, promotion of biological agents or the judicious use of chemicals in communities.

2007 Report

A report on this action is not available.

Action # 4.2

The MH&E will promote the development of healthy settings in communities, institutions, and public spaces and lobby for improvements in amenities to protect environmental public health.

2007 Report

A report on this action is not available.

Action # 4.3

The MH&E will collaborate with Ministries and Agencies and key stakeholders to promote the application of appropriate onsite wastewater and excreta treatment systems to preserve water quality and public health.

2007 Report

A report on this action is not available.

Action # 4.4

The MH&E will lobby Government Ministries and Agencies and the providers of drinking water, including providers of packaged (bottled) water, to ensure that the drinking water quality standard meets the World Health Organization's requirements.

2007 Report

A report on this action is not available.

Action # 4.5

The International Centre for Environmental and Nuclear Sciences (ICENS) will continue research into food contamination by heavy metals in Jamaican soils.

2007 Report

With the exception of cadmium, the concentrations in foods of the potentially toxic elements usually of concern e.g. arsenic, lead, mercury, are generally well below acceptable limits. The definition of high cadmium soil areas and soil/crop relationships has generally been achieved for numerous Jamaican foods. Some foods contain concentrations of this element that are considered unacceptable in some countries, presenting some risk of rejection of such exports. The cadmium uptake by foods is largely determined by soil-Cd concentration and the foods of greatest concern as possible sources of Cd are: ackee, callaloo, carrot, coco, pak choi, sweet potato, yam, cattle kidneys and livers. However other elements may interact with cadmium and these have still to be explored. The ICENS' databases now contain enough data to produce accurate maps of soil-cadmium and yam-cadmium distributions that can provide the necessary information for land use decisions, including crop substitution.

Action # 4.6

The ICENS will continue research into the implications of lead nitrate as a result of the smelting of lead acid batteries

2007 Report

The International Centre for Environmental and Nuclear Sciences continued the work on lead poisoning of children and mitigation of lead hazards. The focus was on inner city areas for which there was already information of a high intensity of lead smelting which had been done in the past, leading in some locations, to extreme contamination. The main sites were in the Kingston Metropolitan Area and included communities such as Drewsland, Marverley, Whitfield Town, Maxfield and Waltham Gardens where back yard battery repair and smelting shops were operated. A total of 120 soil samples were collected from 39 contaminated sites. The school environment such as

air/dust, soil and water was also tested for lead along with blood lead analysis of 322 blood lead samples of children from 14 schools. Blood lead screening was also provided for residents. Fifty-seven cases of children were found to be lead poisoned according to World Health Organisation standards. For these mitigation is in progress. The first *National Report on Chemicals in the Jamaican Environment* has been published. This is a seminal document on lead in our environment.

Action # 4.7

The ICENS will continue studies on cadmium intakes by humans and possible health effects.

2007 Report

The most important source of cadmium intake by humans is food. Therefore, elemental food composition tables are being prepared and the cadmium contents of a large number of foods have been determined. Diet and food frequency studies have been conducted on the sample population living in an area which spans the Parishes of St. Elizabeth, Trelawny, Clarendon and Manchester. These indicate that some 95% of the population has Cd intakes well below the WHO limit and, on this basis, should be at little risk. The other 5% however, show elevated cadmium intakes and have been further examined.

A determination of health consequences of ingestion of cadmium by the Jamaican population is not only complex but difficult as relevant data are mostly unavailable. However, studies indicate that cadmium, though generally associated with several fatal afflictions, does not appear to have a first order effect on mortality in Jamaica. Nevertheless, the results on urine samples indicate that cadmium exposure is contributing to incipient renal tubular dysfunction, a condition that can lead to end stage renal disease. Work in this field will be expanded and intensified as funds become available.

Action # 4.8

The MH&E, in collaboration with its partners and stakeholders, will pursue policies, plans and programmes to enhance occupational and environmental safety and health in the Jamaican workplace.

2007 Report

A report on this action is not available.

5. PROTECTION OF THE ATMOSPHERE

GOAL: Reduction in emissions of pollutants to air, focusing on pollutants causing human health impacts and ozone depletion, and on pollution originating from transport and industry.

Indicators

Indicator	Source of Data
Incidences of respiratory tract infection caused by Air Pollution	MH&E
Number of anthropogenic sources of emission	NEPA
Number of companies with Action Plans for air emission quality improvement	NEPA
Ambient concentration of air pollution in urban areas	NEPA
Consumption of ozone depleting substances	STATIN

ACTIONS FOR 2006– 2009

A. AIR QUALITY

Action #5.1

NEPA will implement the 2006 Air Quality Regulations related to emissions and ambient air quality. Air quality monitoring will become a regular exercise.

2007 Report

Ambient air quality monitoring started in the Kingston Metropolitan Area (KMA) in 2004. The parameters of interest are those gazetted in 1996 as ambient air quality standards; particulate matter (TSP and PM₁₀), (TSP = Total Suspended Particulate. PM₁₀ = particulate matter of diameter equal to or less than 10 micrometer. PM₁₀ is an important component of total suspended matter as these particles can penetrate deep into the respiratory system) sulphur dioxide (SO₂) and nitrogen dioxide (NO₂). Three sites in Kingston and one in St. Ann are currently being monitored.

Action #5.2

The Ministry of Transport and Works will continue to take steps to reduce emission levels from the transportation sector.

2007 Report

A report on this action is not available.

B. OZONE DEPLETING SUBSTANCES

Action # 5.3

NEPA through the National Ozone Unit will continue to execute projects with objectives to phase out the use of ozone depleting substances enabling Jamaica to fulfill its obligations under the Montreal Protocol.

2007 Report

Execution of three projects continued during the year. These were the Institutional Strengthening Project, Methyl Bromide Phase Out project and the Terminal Phase out Management Plan for CFCs – UNDP project.

Action # 5.4

The Ministry of Health and Environment will continue to lead the process to enact the Ozone Bill.

2007 Report

The Ozone Bill was not enacted in 2007. It is anticipated that this will materialise in the 2008/9 financial year. The Act will replace the existing Ministerial Orders under the Trade Act that govern the ODS phase-out programme.

Action # 5.5

NEPA will continue to provide information to the refrigeration industry and the general public on various aspects of ozone depleting substances and their alternatives

2007 Report

Public education continued through the Public Education and Corporate Communication Branch of NEPA. This involved giving presentations to schools and setting up booths at various events where information was disseminated. International Ozone Day was celebrated on September 16 through the staging of an information fair at Devon House and an outside broadcast of the event by Power 106 FM.

6. FRESHWATER RESOURCES: DEVELOPMENT / MANAGEMENT / USE

GOAL: Good quality water supplies as well as their sustainable use and protection.

Indicators

Indicator	Source of Data
Ground water availability and surface water availability	WRA
Annual withdrawals of ground and surface water as a % of total renewable water [Water stress (%)]	WRA
Reach of river polluted (%) - saline intrusion, industrial pollution, sewage pollution, agricultural pollution	WRA
Land area reserved for water conservation	WRA
Percentage of population connected to water supply	STATIN
Water demand by sector	WRA

ACTIONS FOR 2006 - 2009

Action # 6.1

The Water Resources Authority will upgrade the Water Resources Information Management System.

2007 Report

The upgrade is in two parts.

Part 1 is the upgrade of the hardware and software that allows for the daily performance of the Authority and the analysis of data and the generation of water resources information. This has been completed and the annual maintenance of the system is ongoing to maintain a 99% operational status. Over 20 new computers (workstations) were installed, 1 new server, 1 new power vault for storing digital maps and the network upgraded to operate at faster speeds.

Part 2 is the establishment of databases to allow for easy access of data. This is 70% complete. The database has been established. It is web based and will allow for the manipulation of data to generate graphs, tables, maps and other figures to show trends in water resources availability (quantity) and quality. The database is now being populated with the various data and should be completed by the end of November 2007.

Action # 6.2

The Water Resources Authority will rehabilitate and upgrade the National Hydrologic Network.

2007 Report

The upgrade of the national hydrologic monitoring network is ongoing. Funds allocated in the 2006/2007 financial year have led to the following:

- Over 30 stream flow stations rehabilitated
- Two new stations constructed on the Cabarita and Rio Bueno Rivers
- Three index wells cleared of blockage
- Over twenty index wells had their elevations determined to reduce water levels to a common datum for comparison
- New equipment procured for field monitoring
- Data loggers for the digital recording of stream flow data has been ordered and will be installed once the shipment arrives.
- Groundwater data loggers (Divers) have been ordered for installation in 12 test wells across the island before expanding the network

The rehabilitation and upgrade of the network will continue into 2007/2008 FY.

Action # 6.3

The Water Resources Authority will undertake an assessment of the impact of waste generated by five rum distilleries on ground and surface waters.

2007 Report

The literature search and data review of previous work has started. Links have been established in the field with distilleries and community groups to include all stakeholders in the assessment. An assessment was completed for the Upper Morass in the Black River Hydrologic Basin and this will be further upgraded once the fieldwork is fully underway. The field work for this assessment will begin fully in the 2008/2009 financial year with completion in the 2009/2010 financial year. The late start to the fieldwork has been due to the lack of staff within the Water Quality and Environment Unit to undertake the many assignments.

Action # 6.4

The Water Resources Authority will implement a water education for teachers programme aimed at increasing awareness of the issues related to the conservation, protection and efficient use of Jamaica's water resources.

2007 Report

The WRA has been collaborating with Project WET International and UNESCO in developing this programme. In March 2006 Project WET International and UNESCO signed a MOU at the Fourth World Water Forum in Mexico City to pool resources and efforts to launch a Water and Education programme across the hemisphere. Jamaica had indicated prior to the signing of the MOU that it was interested in the water education for teachers and a first workshop was held in Jamaica in 2005. In September 2006 the WRA met with project WET International and UNESCO in Miami to plan the programme for the region with Jamaica hosting the first workshop. This workshop was held June 25 and 26, 2007 in Kingston. Two representatives of three other Caribbean countries participated in the workshop. The representatives were a water specialist and an education specialist from the Bahamas, St. Lucia and Trinidad. In addition senior representatives of the education and environment sector (Ministry, Teachers Colleges and NGOs) in Jamaica were participants. UNESCO and Project WET International were represented through the local office and the regional director respectively as well as the project coordinator from Mexico. The workshop reviewed a draft activity guide for use as resource material in the classroom, rated the activities, evaluated the suitability of the activities for the Caribbean and made recommendations for new activities that were more suited for the region. A draft of the first activity related to coral reefs is now being reviewed and tested in the classroom. An activity on hurricanes is now being developed. The consensus from the workshop is that there is no need to modify the curriculum in the Caribbean as water is already included. The activities were seen as a more effective, interesting and interactive mode of imparting the knowledge. Once the new activity guide book is completed the Water and Education programme in Jamaica will be launched followed by similar action in other Caribbean territories.

Action # 6.5

Ministry of Water and Housing implement the strategies and action plan developed for the water sector.

2007 Report

A report on this action is not available.

7. LAND RESOURCES: AN INTEGRATED APPROACH TO PLANNING AND MANAGEMENT

GOAL: Bringing the state of the built environment in conformity with the principles of health protection, improved quality of life and sustainable development.

Indicators

Indicator	Source of Data
The number of updated Development Plans and Orders	NEPA
Percentage of population living in urban areas	STATIN
Number of New Low-Income Housing Solutions	STATIN
Number of Housing units provided by Private and Public Sector	STATIN
Number of Household tenure (own, rent or lease)	STATIN

ACTIONS FOR 2006 - 2009

A. DEVELOPMENT PLANS AND ORDERS

Action # 7.1

The Government will enact a new Environment and Planning Authorities Act to improve the governance framework at both the national and local levels and promote sustainable development.

2007 Report

Discussions started regarding an appropriate legislative framework for NEPA, recognizing that there is the need for rationalization of roles and responsibilities for decision making and coordination on environmental and planning matters. The former Ministry of Local Government and Environment, in consultation with NEPA, retained the services of a consulting firm to assist in identifying issues related to the operational effectiveness of NEPA as a merged entity and to recommend the most appropriate legal and institutional framework for going forward. Drafting instructions for the selected legal and institutional approaches are to be prepared.

Action # 7.2

NEPA will continue to prepare Development Orders to ensure that land development conforms with established standards.

2007 Report

NEPA completed Draft provisional Development Orders for the Parishes of Manchester, Trelawny and Portland and the town of Negril. Work will commence on the preparation of a St Catherine Provisional Development Order and finalization of the Kingston and St. Andrew Provisional Development Order during 2007-2008. The Development Orders are intended to provide guidance for development activity in these areas. Major development activities are slated to be implemented in these parishes and towns and therefore these Orders encourage compatible land use patterns, secure lands to satisfy future demands, enhance the historical and architectural character of the parishes, and safeguard and enhance its environmental integrity, thereby maintaining the unique features. Over the medium term, NEPA will be working to complete new Development Orders for all parishes.

Action # 7.3

Sustainable Development Plans will be prepared for each parish by the Local Authority in collaboration with the MH&E.

2007 Report

NEPA completed work on the Santa Cruz Sustainable Development Plan.

B. LAND ADMINISTRATION

Action # 7.4

The NLA will develop a coherent approach to the management of Crown lands.

2007 Report

A report on this action is not available.

Action # 7.5

The Mines and Geology Division of the Ministry of Agriculture will ensure the restoration of mined-out lands by enforcing the mining regulations guiding the restoration of mined-out lands.

2007 Report

Since the amendments to the Mining Regulations in August 2004, there has been an increase in the level of compliance in respect of the restoration of mined-out lands. There has been a significant increase in the areas being certified as having been satisfactorily restored – 150 hectares certified in 2003 versus 580 hectares in 2006.

C. HUMAN SETTLEMENTS**Action # 7.6**

Government will take the necessary action to ensure that adequate housing for workers is made available in tourism growth centres.

2007 Report

A report on this action is not available.

Action # 7.7

Government's contribution to the housing sector over the next three (3) years will be in the region of J\$30b, and is to provide shelter for almost 35,000 Jamaicans.

2007 Report

A report on this action is not available.

D. LAND INFORMATION SYSTEMS

Action # 7.8

The Land Information Council of Jamaica (LICJ) will continue its activities to harmonize efforts at GIS development in support of the environment and physical planning.

2007 Report

A report on this action is not available.

Action # 7.9

The Ministry of Agriculture and Lands and the NLA will develop a national spatial information infrastructure.

2007 Report

A report on this action is not available.

Action # 7.10

The ICENS will continue geochemical mapping in Jamaica using state of the art techniques.

2007 Report

The detailed soil geochemistry for Jamaica is ongoing with present emphasis on the Parishes of Trelawny, Hanover, Clarendon and St. Ann, at sampling densities in excess of 1 in 4 square kilometers. ICENS has continued to develop the national geochemical surveying and databases using state of the art techniques. These national geochemical databases are being prepared in digital form for use with imagery analysis.

Geochemical maps of the distribution of cadmium and other heavy metals are being produced and will find increasing use in a wide variety of agricultural, environmental and economic applications and studies. Geochemical data will be applied to urban and rural planning through the integration of land use plans with geochemical and geological maps.

Action # 7.11

The Ministry of Agriculture and Lands will establish a Squatter Unit and seek to rationalize squatting and informal settlements.

2007 Report

A Squatter Unit has been established and is implementing a programme aimed at reducing the incidences of squatting.

8. CONSERVATION OF BIOLOGICAL RESOURCES

GOAL: Conservation and sustainable use of the island's biological resources to the benefit of all

Indicators

Indicator	Source of Data
Population estimate of key species: Endemic Flora, Endemic Fauna	NEPA
Number of management, recovery and action plans; and strategies for threatened/endangered species effectively implemented	NEPA
Declaration of closed seasons and implementation of size limits (Conch, Lobster, Game Birds, Orchids)	NEPA
Number of violations of Wild Life Protection Act (court cases, arrests, warnings etc.)	NEPA
Number of species threatened/endangered	NEPA
Number of reported cases of CITES listed species imported/exported	NEPA
Ratification of International Treaties and Conventions related to Biological Resources and the implementation of local action plans	NEPA

ACTIONS FOR 2006 - 2009

Action # 8.1

NEPA will implement the National Biodiversity Strategy and Action Plan.

2007 Report

Specific project funds have been requested through UNDP to support action plan activities.

Action # 8.2

NEPA will undertake island-wide surveys of selected endangered species.

2007 Report

Species surveys were conducted in 2006 -2007 for four fauna groups; the American Crocodile, Game Birds, the Jamaican Iguana and Sea Turtles

Action # 8.3

NEPA will prepare and periodically revise species management/recovery plans.

2007 Report

During the year 2006-2007 NEPA prepared management/recovery plans for the plant species *Malpighia proctorii*, Game Birds and the Jamaican Boa (*Epicrates subflavus*)

Action # 8.4

NEPA will monitor for and eradicate, where possible, invasive species (both flora and fauna) which are impacting the natural environment.

2007 Report

An Invasive species monitoring committee has been established. A calendar and newsletter were produced highlighting the potential negative impact of invasive species.

Action # 8.5

NEPA will prepare material transfer agreements for the use and removal from the wild of Jamaica's flora and fauna.

2007 Report

Material transfer agreements have been prepared for a number of species taken from the wild primarily for research purposes. Seventeen such agreements were approved during 2006 -2007.

Action # 8.6

The National Commission on Science and Technology will develop and implement a National Bio-Safety Framework.

2007 Report

A draft National Biosafety Policy and drafting instructions were prepared. The documents will shortly be submitted to Cabinet and the CPC respectively.

9. PROTECTED AREAS

GOAL: Development of a protected area system to ensure, conservation of resources for sustainable use by present and future generations, expansion and diversification of economic development and contribution to public education and recreation.

Indicators

Indicator	Source of Data
Protected Areas as a percent of total area (land and marine)	NEPA
Capital investment per year in Protected Areas	NEPA, Forestry Dept, JNHT, Fisheries Div.
Number of Protected Areas Management Plans being implemented	NEPA, Forestry Dept, JNHT, Fisheries Div.
Percentage achievement of output indicators of Operational Plans	NEPA, Forestry Dept, JNHT, Fisheries Div.

ACTIONS FOR 2006 - 2009

Action # 9.1

The Protected Areas Strategic Action Plan (5 years) will be implemented by the Government, stakeholders and other partners.

2007 Report

The Programme of Work for Protected Areas under the Convention on Biological Diversity (CBD) requires that Parties adopt legal frameworks for national, regional and sub-national protected areas systems of countries where appropriate. In this regard, NEPA has developed proposed protected area regulations for several of the sites declared under the Natural Resources Conservation Authority Act (NRCA). These sites include: The Palisadoes-Port Royal Protected Area; the Portland Bight Protected Area and the Negril Environmental Protection Area.

During 2006-2007, draft papers were prepared on proposed regulations for the Palisadoes-Port Royal Protected Area; Portland Bight Protected Area and the Mason River Protected Area.

Action # 9.2**NEPA will develop and implement Protected Areas User Fee Regulations.**2007 Report

Recommendations for implementation of user fee system in selected Protected Areas are now being reviewed by the NRCA.

Action # 9.3**NEPA, Forestry Department, the Fisheries Division and the Jamaica National Heritage Trust will continue to collaborate with communities and other stakeholders in the development of Management Plans for declared Protected Areas.**2007 Report

For the reporting period, the Fisheries Division has sought assistance through The Nature Conservancy (TNC) to assist in the development of a management plan for the Pedro Cays. A socio-economic study (the first of its kind for the cays) was completed through a consultant hired by TNC which has since been reviewed by the Division.

NEPA completed a Pre-Declaration Assessment of the Canoe Valley area which included a socio-economic survey, terrestrial, aquatic, marine and wetland assessments. The Pre-declaration Resource Assessment Report is expected to be completed during the first quarter of 2007-2008.

Action # 9.4**NEPA will develop and implement a monitoring and evaluation system for Jamaica's Protected Areas System.**2007 Report

As is required under the co-management agreements, operational audits of the Jamaica Conservation Development Trust (JCDT), Negril Coral Reef Preservation Society (NCRPS) and Montego Bay Marine Park Trust (MBMPT) were conducted and the corresponding Monitoring/Operational Audit Reports were completed and presented to the NRCA.

Action # 9.5

NEPA will continue to recommend wetland sites for inclusion in the Ramsar Convention's List of Wetlands of International Importance.

2007 Report

Jamaica has two Wetlands of International Importance, namely the Black River Lower Morass and Palisadoes-Port Royal. No new area was designated during the period. World Wetlands Day (WWD) is celebrated annually on February 2nd and was commemorated. It marks the anniversary of the adoption of the Convention of Wetlands signed in Ramsar, Iran on February 2, 1971. In October 1997, Jamaica became the 104th Party to the Convention on Wetlands of International Importance, also called the Ramsar Convention.

The day was celebrated under the theme, "Wetlands, Sustaining Life & Livelihoods". The National Environment and Planning Agency (NEPA), in collaboration with the National Ramsar Committee organized activities to mark this important event, including a tour of the UWI Marine Laboratory and the mangroves in the Palisadoes - Port Royal Ramsar Site.

Other activities included displays mounted at the Kingston and St. Andrew Parish Library and the Institute of Jamaica between January 30 and February 3 and the distribution of posters to libraries island-wide.

Action # 9.6

Public education material on Protected Areas will be developed.

2007 Report

The National Environment and Planning Agency (NEPA) partnered with RARE (a U.S based NGO) and the Nature Conservancy (TNC) to implement a conservation campaign project designed to strengthen the capacity of the Port Royal to conserve the areas natural resources. The resources in the Palisadoes-Port Royal Protected Area include wetlands, coral reefs, seagrass beds, cays, and dunes. Financial support was also provided by the NRCA for a number of activities, such as: the employment of rangers, beach/mangrove clean-up, conducting research, as well as refurbishing and installation of signs and bollards.

The conservation campaign will, among other things:

- equip the Port Royal community to better manage the area's natural resources
- give the community a "voice" in conserving their natural resources; and
- help individuals within the community to improve their standard of living through the pursuit of sustainable livelihoods.

10. FORESTRY AND WATERSHED MANAGEMENT

GOAL: Enhancement of forest cover to ensure improved watershed and ecosystems services

Indicators

Indicator	Source of Data
Forest area as a percentage of land area.	FD
Annual rate of decrease/increase in forest cover	FD
Change in ranking of the 26 Watershed Management Units	NEPA
Land area of types of forest	FD
Number of bush fires per year	NEPA/MLG&E
Charcoal production per year	STATIN
The number of hectares of land reforested per year	FD
The number of Watershed Management Plans/Strategic Action plans being implemented	NEPA
The number of Local Watershed/Forest Management Committees	FD/NEPA
Percentage achievement of output indicators of management/strategic action plans	FD/NEPA

ACTIONS FOR 2006 - 2009

Action # 10.1

The Forestry Department will implement the National Forest Management and Conservation Plan.

2007 Report

A report on this action is not available.

Action # 10.2

The Forestry Department will implement more effective patrolling and policing of transported timber and enforcement laws.

2007 Report

A report on this action is not available.

Action # 10.3

The Forestry Department will be strengthened as an institution to fulfill its role to educate the public about trees, forests and the environment and will increase its implementation of environmental education programmes.

2007 Report

A report on this action is not available.

Action # 10.4

The Ministry of Health & Environment, Ministry of Agriculture the Forestry Department and NEPA will provide incentives to stakeholders to ensure the protection of the watershed services.

2007 Report

See Action 1.12.

Action # 10.5

NEPA will develop Watershed Management Plans/Strategic Action Plans to establish environmental stewardship in selected watersheds.

2007 Report

A *Strategic Action Plan (SAP) for Environmental Management of the Rio Cobre Watershed* that covers the five-year period April 2008 – March 2013 was prepared. This SAP when implemented, will ensure the proper management and by extension, the sustainability of this watershed. The Action Plan is built around a framework that links specific actions to strategic objectives and watershed management goals. The management goals of this plan encompass the three (3) conceptual pillars of the integrated watershed management paradigm; environmental protection, sustainable economic development, and stakeholder participation and includes:

1. Improved water quality and environmental conditions.
2. Improved economic returns from sustainable natural resource use.
3. Active involvement of communities, government agencies, and the private sector in watershed management.

It is hoped that this SAP would be the model to be adapted to other WMUs, and lessons learnt would be transferred.

Action # 10.6

The Forestry Department will produce 590,000 seedlings by the year 2009.

2007 Report

A report on this action is not available.

Action # 10.7

The Forestry Department will review stumpage fees to reflect true market values.

2007 Report

A report on this action is not available.

Action # 10.8

The Forestry Department will reforest 300 hectares of public land by 2009.

2007 Report

A report on this action is not available.

Action # 10.9

The Forestry Department will reforest 900 hectares of private land by 2009.

2007 Report

A report on this action is not available.

Action # 10.10

The Forestry Department will declare additional Forest Reserves.

2007 Report

A report on this action is not available.

Action # 10.11

NEPA and the National Integrated Watershed Management Committee will monitor implementation of the Watershed Policy.

2007 Report

A report on this action is not available.

Action # 10.12

The Forestry Department, in collaboration with the FAO will assist in the formation of a Tree Growers Association.

2007 Report

A report on this action is not available.

Action # 10.13

The Forestry Department will collaborate with other partners in the implementation of the Tropical Forest Conservation Fund.

2007 Report

A report on this action is not available.

11. OCEANS, SEAS AND COASTAL RESOURCES

GOAL: The sustainable development of ocean and coastal resources and ecosystems and provision of the conditions of governance required for effective integrated coastal area management.

Indicators

Indicator	Source of Data
Biochemical Oxygen Demand (BOD) and faecal coliform levels in water bodies	NEPA
Number of coastal erosion and beach destruction sites	NEPA
Number of rehabilitated Public Bathing Beaches	NEPA
Number of Blue Flag Certified Beaches	NEPA
Number of Licenses granted to undertake beach modification/improvement works along the coast	NEPA
Number of subdivision and permit application approvals in the Coastal Zone	NEPA
Number of oil spills and fish kills reported per year	NEPA
Percentage of live coral cover	NEPA
Annual catch by major species (Marine fish, Lobster, Conch, Crab, Shrimp etc.)	FD

ACTIONS FOR 2006 - 2009

Action #11.1

NEPA will develop and implement a comprehensive framework for monitoring the status of Jamaica's coastal and marine resources.

2007 Report

NEPA, in collaboration with the Jamaica Coral Reef Monitoring Network (JCRMN) has established a framework for monitoring. Data on live coral cover is being collected at a number of sites across the island. The Reef Check and Atlantic Gulf Rapid Reef Assessment (AGRRA) methodologies are used in the monitoring and data collection exercises.

Action # 11.2

NEPA will review and complete an Integrated Coastal and Watershed Atlas.

2007 Report

Work has started on the development of a comprehensive ecosystem database. Data is currently available on water quality, coral reef health, wetland quality, population, coastal erosion sites, etc.

Action # 11.3

Government will implement the National Oceans and Coastal Zone Policy in order to rationalize Government and Civil Society roles for sustainable management of coastal and ocean resources.

2007 Report

The National Oceans and Coastal Zone Policy is administered by the Ministry of Foreign Affairs and Foreign Trade through the work of the Council on Oceans and Coastal Zone Management. Significant achievements that have been facilitated by the Council over the reporting period include; the establishment of a permanent structure on the South West Rock, heads of agreement between China and Jamaica regarding research in ocean management and delimitation discussion between Jamaica and its Caribbean neighbours.

Action # 11.4

The Ministry of Agriculture and the Fisheries Division will develop and implement a National Fisheries Policy.

2007 Report

For the reporting period, the Division, through a consultancy did a synthesis of several draft working papers including a Social study, a Economic Study, A Macro-Economic Study to form a comprehensive Draft National Fisheries Policy. This is currently being reviewed in-house by the Fisheries Division.

Action # 11.5

The new Fisheries Bill which is currently being drafted by Government will be completed and enacted.

2007 Report

A report on this action is not available.

Action # 11.6

NEPA will review the National Life Guard examination and certification programme with a view to broadening the technical capacity of Life Guards to include environmental awareness.

2007 Report

NEPA developed a procedures manual, designed as a field guide to officers processing lifeguard licences during national lifeguard examinations. The manual focuses on the organizational and administrative aspects crucial to the examination and presents an outline of recommended procedures. It includes procedures for preparing an upcoming examination, such as documentation (application forms, control sheets etc), newspaper ads, request for funds; and operational procedures that must be adhered to during the national examination.

Amendments were also made to the Safety Measures Regulations of the 2006 Beach Control Act. Under the new regulations, owners of beaches or licensed areas are required to employ the number of licensed lifeguards as specified by NEPA, ensure that the areas are adequately manned at all times by a lifeguard and provide lifeguards with clearly marked uniforms.

The Beach Control (Safety Measures) Regulations, 2006 also requires beach licensees to keep all life saving devices in good condition, ensure that all life saving devices are readily available for use to the lifeguards, and allow NEPA officials to inspect such devices upon request.

Action # 11.7

MH & E will continue the consultative process for the Beach Policy (Green Paper) which is to be reviewed and finalized in the form of a White Paper for approval by Parliament. The Policy will then be implemented.

2007 Report

The draft Policy is currently being revised by the MLGE to take into account concerns expressed by stakeholders, including the effects of large coastal developments and over water rooms.

It is anticipated that the revision to the draft Policy will be completed and the document circulated for comments by the end of the 3rd quarter of the 2007/8 financial year.

Action # 11.8

NEPA will continue to work to secure the tenure of Public Beaches.

2007 Report

All categories of beaches across the Island are being inspected and Global Positioning System (GPS) data collected and inputted to an existing dataset to aid the spatial analysis of beaches.

The tenure of the Salem Public Beach in St. Ann was secured by the St. Ann Parish Council and rehabilitation to the structures on the beach completed.

Action # 11.9

NEPA will review and implement the Jamaica Coral Reef Action Plan.

2007 Report

The Jamaica Coral Reef Action Plan is now being reviewed.

Action # 11.10

The Fisheries Division will be transformed into a performance-based Executive Agency.

2007 Report

The Division has begun preparations guided by the Cabinet Office through its Public Sector Reform Unit. Several consultancies have been done resulting in the development of a Modernization Plan, a Medium Term Financing Plan and a Fisheries Strategic Review. These were reviewed and the proposed implementation of a “Fisheries Agency” by April 2008 will be preceded by a transitory phase where the structure of the Agency will be developed under the auspices of a senior management team led by a CEO who will be appointed.

Action # 11.11

The Fisheries Division will seek to enhance capacity building in research and development of underutilized fisheries (e.g. diamond back squid, offshore pelagics).

2007 Report

The Fisheries Division was instrumental in the co-development (with the Caribbean Maritime Institute, *et al*) of a project submitted to the IDB for funding to ascertain the potential development of a diamond-back squid fishery in Jamaica.

The project entailed key components including the development of a Marine Chart; conducting experimental fishing; as well as training in areas such as sanitation, fishing and safety at sea. The main target beneficiary is small scale fishers. The management and regulation of the fishery will be a high priority of the Fisheries Division should any empirical study find the fishery to be commercially viable.

Action # 11.12

The Fisheries Division will develop and implement a pilot project on the use of casitas and condominiums as a means of enhancing lobster populations.

2007 Report

For the reporting period, the Fisheries Division began a pilot project in Bowden, St. Thomas at the Mariculture Research station where 9 lobster condominiums (artificial shelters) were deployed. There has been significant success to date in terms of aggregation of juvenile lobsters in the artificial shelters. Data collection is currently being maintained at the site. The Division made contact through the Caribbean and Americas Department of the Ministry of Foreign Affairs under a Jamaica-Cuba Bilateral Technical Cooperation Programme to seek technical expertise from Cuba to assist the Division in developing lobster casita technology. The expert visited the country and worked with the Division in developing the technology in March 2007. Jamaica still maintains a bilateral agreement with Mexico in this field and hopes to continue this collaboration.

Action # 11.13

The Life Science Department of UWI will collaborate with NEPA on research in the areas of ocean and coastal zone management and protected areas management.

2007 Report

Discussions are far advanced regarding a MOU between NEPA and UWI in the area of research collaboration.

12. SUSTAINABLE AGRICULTURE AND RURAL DEVELOPMENT

GOAL: Ensuring that agricultural practices are carried out in a manner that minimizes the impact on the watershed, water supply and coastal areas while enhancing rural community development.

Indicators

Indicator	Source of Data
Changes in agricultural land use per parish per year	NEPA
Agricultural production of all major crops	RADA
Pesticide/herbicide/fertilizer imported per year	STATIN
Value of agriculture crop loss due to soil erosion	RADA

ACTIONS FOR 2006 - 2009

Action # 12.1

RADA will encourage integrated crop/pest management in the field through increased extension services.

2007 Report

A report on this action is not available.

Action # 12.2

RADA will implement a national pest management plan to protect local agriculture from recently introduced exotic pests.

2007 Report

A report on this action is not available.

Action # 12.3

RADA will identify soil conservation treatments such as contour barriers, grassed waterways, check dams, tree orchards, intercropping and minimum tillage suitable for given areas, and encourage and assist farmers to effect same in support of sustainable agriculture

2007 Report

A report on this action is not available.

Action # 12.4

RADA will encourage the production of organically produced crops to satisfy the growing demand for health foods by demonstrating organic farming to farmers.

2007 Report

A report on this action is not available.

Action # 12.5

RADA will support the promotion of protected agricultural production through the utilization of shade/green house technology, thereby reducing pesticide usage in production practices.

2007 Report

A report on this action is not available.

Action # 12.6

STATIN will conduct a Census of Agriculture (2007) to provide; a register of farmers, and reports presenting data on ownership, structure and size of farms, utilization of farm land, cropping patterns, livestock and poultry rearing and use of irrigation.

2007 Report

Data collection for the 2007 Census of Agriculture began on February 2007 in selected areas of all parishes with the exception of Kingston. It is anticipated that interviewers will collect information from over 150,000 farmers. A report presenting preliminary information for the census is scheduled for publication by March 2008.

13. TOURISM AND THE ENVIRONMENT

GOAL: Mainstreaming eco-friendly practices within the Tourism Sector

Indicators

Indicator	Source of Data
Accommodations in Tourism Sector (Number of Hotels, Rooms, Guesthouses, Apartments, Resort Villas)	STATIN
Occupancy level per year	STATIN
Average length of stay per visitor	STATIN
Number and types of eco-tourism facilities	MTEC/TPDCo
Number of hotels with Green Globe Certification	MOT
Number of registered sites, districts, monuments and structures	MOT
Number of World Heritage Sites	MOT
Number of beaches using Blue Flag Certification	NEPA

ACTIONS FOR 1999 - 2002

Action # 13.1

The Ministry of Tourism will develop a concept paper to guide research for the development of a policy on ecotourism /heritage / community based tourism in Jamaica, as it relates to the Master Plan for Sustainable Tourism.

2007 Report

A report on this action is not available.

Action # 13.2

The Ministry of Tourism will develop environmental rewards and incentives to encourage hotels and other tourism related entities to adopt Environmental Management Systems and to operate within International Standards for example, ISO 14000 and the Green Globe Award.

2007 Report

A report on this action is not available.

Action # 13.3

The Ministry of Tourism will develop a Policy to streamline and integrate the management of motorized and non-motorized water- based leisure sport in Marine Recreational Areas.

2007 Report

A report on this action is not available.

Action # 13.4

The Ministry of Tourism will coordinate the development of sustainability indicators to gauge and monitor the tourism sector's progress towards achieving sustainable development

2007 Report

A report on this action is not available.

14. ENERGY RESOURCES / ALTERNATIVE ENERGY

GOAL: Reduction in the environmental impact of the energy sector, the promotion of energy efficient technology development programmes, more extensive use of renewable energy resources and reduction of greenhouse gas emissions.

Indicators

Indicator	Source of Data
Amount of annual energy consumption per capita	STATIN
Amount of petroleum imports per year	STATIN
Share of consumption of renewable energy resources	MEMT
Number of use of alternative energy technology	MEMT
The number of cogeneration facilities	MEMT
Amount of tax concession on alternative energy technology	MEMT
The number of demand side management programmes	MEMT

ACTIONS FOR 2006 - 2009

Action 14.1

The Ministry of Energy Mining and Telecommunications (MEMT) will implement the new Energy Sector Policy.

2007 Report

In February 2006, the Energy Policy Green Paper, which covers the period 2006-2020 was promulgated and subsequently presented to the House of Parliament. The Green Paper provides an overview of the 1995 Energy Policy and addresses ten major elements of the policy with each element consisting of a subsection that outlines the policy issues and recommendations to be addressed. The development of renewable energies is one of the ten subsections outlined in the policy document. The Green Paper is posted on the Ministry's website and persons are invited to submit their comments in writing to the Ministry.

Although, the Green Paper has been presented to stakeholders and energy technocrats at meetings, seminars, conferences and workshops, island-wide consultations have not yet commenced. It is anticipated that public consultations will begin in earnest in the coming months.

Action 14.2

The Ministry of Energy Mining and Telecommunications (MEMT) will facilitate the development of all new and renewable energy sources, especially hydropower, biomass, solar and wind energy.

2007 Report

The Ministry is committed to facilitating development of energy resources in any possible way that it can. To show its commitment the government has included in the Energy Policy Green Paper a policy recommendation, which outlines targets for renewable energy. Renewable energy, which currently contributes about 7% to the national grid are targeted to contribute to the national grid 10% by 2010 and 15% by 2020.

Investment opportunities exist in renewable energy and discussions are ongoing with potential investors to highlight areas ripe for investment. Currently there are 6 mini hydropower plants in Jamaica. The total generating capacity is approximately 23 MW. From proposed projects the total generating capacity is estimated at 90 MW.

Action 14.3

The Ministry of Energy Mining and Telecommunications (MEMT) will establish a central Energy Conservation and Renewable Unit which will act as a facilitator for all new and renewable energy projects.

2007 Report

The PCJ is the Agency of the Ministry of Energy Mining and Telecommunications with responsibility for development of the petroleum and renewable energy resources in Jamaica and for the overall management of the country's energy sector.

The PCJ created the Energy Efficiency Unit (EEU) in 2004 to intensify the thrust towards increasing energy efficiency and conservation at the domestic, commercial and industrial levels. The Unit has realized significant achievements under its "Use Less Pay Less" public education campaign and through the implementation of specific public sector projects, jointly financed by the GOJ/UNDP Public Sector Energy Efficiency Programme. These projects include: energy audits, preventative maintenance programmes, photovoltaic lighting, solar water heating, lighting efficiency improvement, power factor correction and training in twenty-six (26) public hospitals and eight (8) educational institutions.

In November 2006, the Centre of Excellence for Renewable Energy (CERE) was established as a division within the PCJ. CERE aims to ensure that Jamaica will regularly implement new ideas and methods in renewable energy, in recognition of

Jamaica's abundant supply of natural resources. The Centre will diversify Jamaica's energy base by encouraging a selection of indigenous energy options.

Action 14.4

The use of co-generation to meet some portion of electricity supply will continue to be pursued and principles under which the electricity company purchases electricity from co-generators clearly established. (MEMT)

2007 Report

The Office of the Utilities Regulation (OUR) in its regulatory policy for the electricity sector, established, in June 2006, guidelines for the addition of generating capacity to the Public Electricity Supply System. These guidelines can be found on the OUR's website.

Action 14.5

Demand Side Management programmes will be developed for the power sector. (MEMT)

2007 Report

Demand Side Management Programmes were established prior to 2006, however, some of these activities have shifted to the Ministry and the Petroleum Corporation of Jamaica. The Ministry is currently implementing measures that will strengthen these programmes going forward.

15. NATURAL AND ENVIRONMENTAL DISASTERS

GOAL: Assessment of the island's vulnerability to disasters and improvement in resilience, including natural resilience, and account for the impact of climate change, including sea level rise

Indicators

Indicator	Source of Data
Amount of Human and economic loss due to natural disasters	PIOJ
Number of weeks over each year that sections of the island have experienced drought conditions	Met Office
Number of category 1-5 cyclones	Met Office
Number of earthquakes causing damage over the last year	Seismic Unit
Total land area affected by flooding each year	ODPEM
Total number of land slides per sq.km	Mines and Geology Dept.
Number of environmental accidents each year	NEPA
Number of people affected by disasters each year	ODPEM

ACTIONS FOR 2006 - 2009

A. LAND MANAGEMENT AND HAZARD MITIGATION

Action # 15.1

The ODPEM in conjunction with the Ministry of Local Government and Environment will complete and implement the National Hazard Risk Reduction Policy.

2007 Report

A report on this action is not available.

Action # 15.2

The Ministry of Local Government and Environment will review the ODPEM Act in keeping with the strategies outlined in the National Hazard Risk Reduction Policy.

2007 Report

A report on this action is not available.

Action # 15.3

The ODPEM will undertake a vulnerability assessment of the Agriculture and Tourism Sectors.

2007 Report

A report on this action is not available.

Action # 15.4

The ODPEM will continue to ensure the incorporation of hazard information into the development approval process via EIA reviews, hazard assessment for subdivision applications and hazard inventory training for Parish Councils

2007 Report

A report on this action is not available.

Action # 15.5

The ODPEM will develop a GIS hazard database, incorporating data on social, economic and environmental parameters.

2007 Report

A report on this action is not available.

Action # 15.6

The ODPEM will develop a community vulnerability ranking tool which will be used to rank communities based on vulnerability. It will help to identify priority areas for action.

2007 Report

A report on this action is not available.

Action # 15.7

The Mines & Geology Division and the Water Resources Authority will develop hazard risk/vulnerability maps to support the National Disaster Management Plan.

2007 Report

The Mines & Geology Division recently completed and printed the Portland Landslide Hazard Susceptibility Map, and work has commenced on the Landslide Hazard Mapping Project for St. Catherine.

Additionally, the Flood Hazard Map for Portmore has also been completed. The information from this project will be used to update the Portmore Evacuation Plan.

The WRA is moving to have the Water Resources Act 1995 amended to take responsibility for the regulation of Floodwater Control. This will give the WRA the legal mandate to be more proactive in the management of flood risk through the

- Mapping of flood prone areas
- The development of flood plain maps
- The installation and operation of flood alert/warning systems
- The modeling of rainfall runoff and storm surges; and
- The preparation of a Floodwater Control Master plan for the island

The draft amendments have been completed and two stakeholder workshops held to get feed back which has been incorporated in the amendments. The draft legislation is to go to the legislative committee of Parliament in the 2007 legislative year. In the interim the WRA has completed flood plain maps for selected reaches of the Rio Cobre, Yallahs, Rio Minho, Hope River and Rio Grande Rivers. In addition hydrological assessments (modeling) of flooding in the Black River Upper Morass, St. Elizabeth and at Nightingale Grove in St. Catherine have been completed. The WRA also works closely with the ODPEM in the establishment of community flood alert systems to support the NDMP.

Action # 15.8

The Water Resources Authority will develop and upgrade the flood alert/warning system.

2007 Report

The WRA has developed and manages one real time flood warning system in the Rio Cobre Basin and assists the ODPEM in the establishment of several community flood alert systems across the island. The real time system is obsolete as the manufacturer of the equipment no longer maintains that equipment. The WRA has kept the system functioning through the skill and capability of its staff. Funding was provided in the 2006/2007 budget to upgrade the system. The new equipment has been located, ordered and will arrive shortly for installation before the start of 2008. Once the floodwater legislation referred to in Action #15.7 is promulgated the WRA will expand the flood alert/warning systems.

Action # 15.9

The MH&E will work with its Caribbean partners in the development and implementation of a Tsunami Early Warning System.

2007 Report

A report on this action is not available.

B. CLIMATE CHANGE AND SEA LEVEL RISE

Action # 15.10

The MH&E will create and/or strengthen the institutional framework to monitor climate variability, climate change and sea level rise impacts on Jamaica and complete the preparation of the Second National Communication on Climate Change.

2007 Report

See Action 16.4.

Action 15.11

The MH&E will facilitate training, technology transfer, surveillance of climate change and the sharing of experiences to assist in preparedness responses to climate change. Emphasis will be on human resource capability in fields such as remote sensing and mathematical modelling.

2007 Report

A report on this action is not available.

Action # 15.12

The MH&E will work closely with the Caribbean Climate Change Centre, including work impacting on sea level rise, and climate modelling.

2007 Report

A report on this action is not available.

C. OIL SPILLS

Action # 15.13

The MH&E will review and revise the National Oil Spill Contingency Plan. The plan is to take into account hazardous and noxious substances also.

2007 Report

A report on this action is not available.

16. MULTI-LATERAL ENVIRONMENTAL AGREEMENTS

Indicators

Indicator	Source of Data
Ratification of MEAs and the implementation of local action plans	MH&E

ACTIONS FOR 2006 - 2009

A. The Vienna Convention for Protection of the Ozone Layer (1985) and the Montreal Protocol, 1987

Action # 16.1

NEPA and the MH&E will collaborate with the CPC to ensure promulgation of the Ozone Act.

2007 Report

See Action 5.3.

Action # 16.2

NEPA will implement Jamaica's National Halon Bank Management Plan.

2007 Report

This action has been achieved.

Action # 16.3

NEPA will implement a programme to phase out the use of Methyl Bromide in Jamaica.

2007 Report

See Action 5.4.

B. United Nations Framework Convention on Climate Change (FCCC), and the Kyoto Protocol (1997)

Action # 16.4

The Meteorological Office will develop the Second National Communication which will include an Implementation Plan.

2007 Report

Work on the preparation of the Second National Communication to the UNFCCC started in September 2006 and is expected to be completed in August 2008.

Work has started on the Green House Gas Inventory (GHG) component of the Second National Communication of Jamaica and will include:

- Compilation of the GHG inventory for the years 2000-2005
- Compiling anthropogenic emissions of Carbon Dioxide, Nitrous Oxide, Methane by source and removal by sinks and are encouraged to report HFCs, PFCs, and SF6
- The 2006 Revised IPCC Guideline will be use

Vulnerability and Adaptation Assessments component of the Second National Communication of Jamaica:

Work has started with the V & A assessments with four contracts awarded in the following sectors:

- Coastal Zone & Human Settlement
- Water Resources & Agriculture
- Scenarios & Human Health
- Socio-economic assessments

For each of the sector/zone studies the Key Findings will be presented on:

- The effects both direct and indirect of climate variability and climate change impacts
- The vulnerable areas/communities
- The adaptation strategies
- The integration of socio-economic and environmental scenarios
- The interrelations between the effects on the different sectors/zones

For each sector/zone studied adaptation strategies and measures will reflect:

- The specific adaptation options to the effects of climate change (current and future)
- The assessment/prioritization of these options
- The general policies having implications for adaptation
- The needs for capacity strengthening
- The needs for awareness raising, public education and outreach

Mitigation Assessment component of the Second National Communication of Jamaica

The main objective of the Mitigation Assessment component of the Second National Communication of Jamaica is to provide; to the extent where capacities allow, information on programs and measures implemented or planned which contribute to the mitigation of climate change by addressing anthropogenic emissions by sources and sinks of all greenhouse gases (GHGs) not controlled by the Montreal Protocol. This includes as appropriate, relevant information by key sectors on methodologies, scenarios, results, measures and institutional arrangements.

Initial work has started to identify suitable consultants to undertake the task.

Outcomes of the Second National Communication to the UNFCCC on completion among others are:

- The V& A assessments will be used to identify potential projects for funding.
- National response to impacts of climate change will be institutionalized.
- The production of policy-relevant knowledge and information to effect policy dialogue with respect to climate change.
- That public education and awareness for mainstreaming climate change concerns at different levels of the society will be facilitated.

Action # 16.5

The MH&E will implement projects through the facility of the Clean Development Mechanism (CDM) of the FCCC.

2007 Report

A report on this action is not available.

C. Convention on Persistent Organic Pollutants (POPs), Stockholm, 2001

Action # 16.6

The MH&E will implement a National Implementation Plan (NIP) to achieve the objectives of the Convention.

2007 Report

By the end of the 3rd quarter of the 2007/8 financial year, the Ministry shall forward the NIP to Cabinet for approval. Once the document has been approved, the Ministry, in collaboration with NEPA and other public and private sector stakeholders, will develop a slate of projects for dissemination to development and funding agencies to facilitate the implementation of activities outlined in the NIP.

D. International Convention for the Prevention of Pollution from Ships (MARPOL), London, 1973

Action # 16.7

In keeping with the requirements of MARPOL that homeports be equipped with reception facilities for waste, the Ministry of Transport and Works will examine a proposal for the construction of such a facility.

2007 Report

A report on this action is not available.

E. Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Basel (1989)

Action # 16.8

NEPA, through the Natural Resources (Hazardous Wastes) (Control of Transboundary Movement) Regulations, 2002 will control the transboundary movement of hazardous wastes, and monitor and prevent the illegal trafficking of hazardous wastes.

2007 Report

Five (5) permits were issued between 2005 and 2007 by NEPA under the NRCA Act for the trans-boundary movement of hazardous waste.

F. Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region

(Cartagena Convention), 1983; Protocol Concerning Pollution from Land Based Sources and Activities (LBS Protocol), Aruba, 1999

Action # 16.9

Government, through NEPA will implement the National Programme of Action for Protection of the Coastal and Marine Environment from Land Based Sources of Pollution.

2007 Report

Funding support has been requested. It is expected that funding will be available during the 2008-2009 FY.

- G. Convention on Wetlands of International Importance especially Waterfowl Habitat, Ramsar, 1975 (Ramsar Convention)**

Action # 16.10

NEPA will designate as necessary, national wetlands of international importance.

2007 Report

See Action 9.5.

Action # 16.11

NEPA will take responsibility for the conservation, management and wise use of migratory stocks of waterfowl and cooperate in the exchange of information for wetlands management.

2007 Report

A report on this action is not available.

- H. Convention on International Trade in Endangered Species (CITES), Washington, 1973**

Action # 16.12

NEPA, through the Endangered Species (Protection, Conservation and Regulation of Trade) Act, 2000 will regulate the trade in endangered species.

2007 Report

See Action 8.5.

I. The Convention on Biological Diversity, Rio de Janeiro, 1992

Action # 16.13

Government, through NEPA will implement the National Biological Diversity Strategy and Action Plan

2007 Report

See Action 8.1.

J. The Convention on Biological Diversity, Rio de Janeiro, 1992; Protocol on Biosafety, Montreal, 2000

Action # 16.14

The National Commission on Science and Technology will develop and implement a National Framework on Biosafety including the preparation of a Biosafety Policy and Act.

2007 Report

See Action 8.6.

K. United Nations Convention to Combat Desertification (UNCCD), Paris, 1994

Action # 16.15

The MH&E will develop and implement a National Action Plan (NAP) related to land degradation and sustainable land management.

2007 Report

A report on this action is not available.

APPENDIX A

List of participating Agencies/Institutions

- Cabinet Office
- Centre for Marine Sciences, UWI
- Environmental Health Unit
- Fisheries Division
- Forestry Department
- International Centre for Environment and Nuclear Sciences (ICENS)
- Jamaica Bureau of Standards (JBS)
- Jamaica Public Service Company Limited (JPSCo)
- Mines and Geology Division
- Ministry of Agriculture
- Ministry of Energy, Mining and Telecommunications
- Ministry of Health and Environment
- Ministry of Tourism
- Ministry of Transport and Works
- Ministry of Water and Housing
- National Commission on Science and Technology (NCST)
- National Environment and Planning Agency (NEPA)
- National Water Commission (NWC)
- Office of Disaster Preparedness & Emergency Management (ODPEM)
- Office of the Prime Minister (OPM)
- Petroleum Corporation of Jamaica (PCJ)
- Planning Institute of Jamaica (PIOJ)
- Rural Agricultural Development Authority (RADA)
- Statistical Institute of Jamaica (STATIN)
- The Meteorological Service, Jamaica
- Water Resources Authority (WRA)