

The Unit maintains one of the largest *in-vitro* germplasm collections of banana (*Musa* sp.) in the Western Hemisphere. The gene bank also houses, among other collections, many species of Anthurium, orchids, African violet (*Saintpaulia ionantha*) and other ornamentals.

A growing collection of root and fruit crops is also being established to facilitate the planting of hybrid varieties with the required characteristics for processing.

**Potential biological resources:**

- Rosy Periwinkle, which was first identified in Jamaica, is a source of a drug used to treat some forms of cancer;
- Red Nickel is being used to develop a commercial drug;
- Sea Urchin (*Lytechinus variegatus*) is being tested as an anti-cancer drug; and
- The Mustached Bat's (*Pteronotus parnellii*) ultrasound capabilities are being used in physiological and anatomical studies to better understand hearing loss in humans.



*Bletia purpurea* (an orchid)

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## 2. LEGAL AND POLICY FRAMEWORK FOR THE CONSERVATION AND SUSTAINABLE USE OF BIODIVERSITY

### 2.1 Legislation Governing Biodiversity

Jamaica's current environmental legislation provides a basic framework for the conservation and sustainable use of biodiversity. There are at least 52 pieces of legislation which have aspects that directly relate to the management of the environment. However, very few of these statutes deal comprehensively with the protection, conservation and sustainable use of biodiversity, as they are primarily sectoral in nature.

In becoming a Party to the Convention on Biological Diversity, Jamaica bound itself to implement specific obligations under the Convention. The Convention *inter alia* places obligations on State Parties to:

- Put in place measures to develop or maintain the necessary legislative and or regulatory provisions for the protection of threatened species and populations.
- Take legislative, administrative or policy measures to facilitate access to genetic resources by national legislation.
- Regulate and manage the collection of biological resources from natural habitats for *ex-situ* conservation purposes.
- Subject to national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity.
- As far as possible introduce appropriate procedures requiring environmental impact assessments of proposed projects which may have a significant adverse effect on biodiversity and where appropriate allow public participation.
- Take such legislative, administrative or policy measures to regulate, manage or control the risks associated with the use and release of living modified organisms resulting from biotechnology, and provide for the effective participation in biotechnological research, and fair and equitable sharing of benefits arising from the commercial utilisation of genetic resources, especially by countries providing genetic resources.

The Convention only binds Parties and therefore implementation of the provisions of the Convention at a national level requires private individuals, universities and other institutions to have their rights and responsibilities clarified under national law or policy.

The legislative framework in Jamaica does not comprehensively protect ecosystem diversity, species diversity or genetic diversity. A new framework is needed that recognises the components of biodiversity and ensures the sustainable use of biodiversity in Jamaica. In this regard, Jamaica is in the process of reviewing or developing several pieces of legislation that are relevant to the conservation of biodiversity and its sustainable use. These include the review of the Forest Act (1996); the creation of a new Wild Life Protection Act, a new Fisheries Act and a new Watershed Act; and the creation of regulations under The Endangered Species (Protection, Conservation and Regulation of Trade) Act (2000). There are, however, still some gaps in the framework, which are described in Section 3.

#### 2.1.1 The Natural Resources Conservation Authority Act, 1991

The Natural Resources Conservation Authority Act created the Government's environmental agency, the Natural Resources Conservation Authority (NRCA). Under this Act, the NRCA may take the necessary steps to:

- Effectively manage the physical and natural resources of Jamaica so as to ensure their conservation, protection and proper use; promote public awareness of Jamaica's ecological systems and their importance to the social and economic life of Jamaica; manage national parks, marine parks, protected areas, public recreational facilities; and advise the Minister on general policies relevant to the management, development, conservation and care of the environment.
- Develop, implement and monitor plans and programmes relating to the management of the environment, conservation and protection of natural resources and conduct research into such matters.
- Regulate and control development so as not to cause injury to public health or to any natural resource.

Under the Natural Resources Conservation (Prescribed Enterprise, Construction and Development) Order, 1996, the island of Jamaica was prescribed, subject to special controls to minimise adverse environmental and health impacts of development. A list of prescribed types of enterprises, construction or development is contained in the Order e.g., reclamation of wetlands, construction of roads, hotel development, clear-cutting of forested areas. A permit is required to undertake any of the prescribed developmental activities. The Permit and Licensing System became effective in January 1997.

Under the NRCA Act, a licence is required to discharge any poisonous, noxious or polluting substance into waters or the ground. Licences are also used to control the quality of effluent discharged. Regulations and Standards governing the discharge of wastewater are soon to be completed.

The NRCA Act is the only legislation in Jamaica that includes a requirement to conduct Environmental Impact Assessments (EIAs). Section 10 of the Act stipulates that the Authority may require an EIA:

- By notice in writing to an applicant for a permit or a person responsible for undertaking any enterprise, construction or development in a prescribed area, or of a prescribed description or category where it is of the opinion that the activities of such enterprise, construction or development are having or are likely to have an adverse effect on the environment.



Hawksbill Turtle (*Eretmochelys imbricata*) in the Palisadoes/Port Royal Protected area

### 2.1.2 The Wild Life Protection Act, 1945

The Wild Life Protection Act is the only statute in Jamaica that specifically protects designated species of animals and regulates hunting in Jamaica. The main provision that ensures the protection of animals is found in Section 6 of the Act, which makes it a criminal offence for any person to be in possession of any protected

animal, or part thereof. A person may be liable on summary conviction to a fine of one hundred thousand dollars.

The Act includes a list of fourteen animals that are designated as protected in the Third Schedule of the Act. All birds in Jamaica except those in the second part of the Second Schedule of the Act are protected.

The Act also regulates the hunting of game birds and provides for the declaration of game sanctuaries and games reserves in which no hunting is allowed. The First Schedule of the Act declares all Forest Reserves as Game Reserves.

Specific provisions are also in place for the protection of fish and the protection of turtles including the taking of turtle eggs.

### 2.1.3 The Watershed Protection Act, 1965

The Watershed Protection Act provides a framework for the management of watersheds in Jamaica. There are 26 watershed management units declared under the Act. The Act governs the entire island of Jamaica and makes provisions for the intervention of the Government in regulating uses of private land including the clearing of land and implementing appropriate agricultural practices. There are also provisions for intervention through assisted improvement agreements whereby improvement works can be carried out on land to protect watersheds.

No regulations have ever been prepared under this Act and therefore voluntary compliance and training have been the only measures available to ensure appropriate management practices in watersheds in Jamaica. Proposed amendments to the Watershed Act have been completed to remedy the deficiencies in the Act, as there is currently no legal framework for appropriate soil conservation and land use management measures that can be implemented.

### 2.1.4 The Beach Control Act, 1956

The Beach Control Act regulates rights to the foreshore and the floor of the sea in Jamaican waters. Provisions contained in the Act govern commercial and recreational activities; the control and management of development on the beach through licensing provisions and the protection of the marine ecosystem. Marine protected areas may be declared under the Act to:

- Control the disposal of rubbish or other waste matter;



- Control dredging or disturbance in any way of the floor of the sea;
- Prevent or control the destruction or removal of sea fans and sedentary marine animals; and
- Control the searching for or removal of any treasure or artefact from the floor of the sea.

This Beach Control Act is limited in its mandate to govern development and commercial activities on the foreshore and floor of the sea, and does not appropriately address larger issues of the proper management of the coastal zone and marine resources.



Branching Tube Sponge (*Pseudoceratina crassa*)

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### 2.1.5 The Forest Act, 1996

The Forest Act is the only piece of legislation in Jamaica that uses the word 'biodiversity'. This Act sets out the role and function of the Forestry Department and the Conservator of Forests.

The Act vests responsibility in the Conservator of Forests for developing and maintaining an inventory of forests and lands suitable for the development of forests.

The Forestry Department is required to make an assessment of forestry lands to determine their potential for maintaining and enhancing biodiversity. Provisions have been made in the Act for the controlled utilisation of forest resources in a rational manner.

Jamaica has over 100 gazetted forest reserves. Under the Act private lands may be acquired for declaration as forest reserves. One of the purposes of forest reserves is to protect and conserve endemic flora and fauna.

The Act calls for the creation of forest management plans, which stipulate the allowable annual cut where appropriate, conservation and protection measures and the roles of other Government departments. The purpose of forest management

plans is to ensure the protection and conservation of forests, soil, water, wildlife, and forest products.

The Act makes it an offence to: destroy trees, cause damage, light fires, carry axes, kill or injure wild birds or animals in a forest reserve or forest management area.

### 2.1.6 The Fishing Industry Act, 1975

The taking and catching of fish are regulated by the Fishing Industry Act. A licence is required to catch fish utilising one of the prescribed methods under the Act.

The Act provides for the protection of fish through the designation of fish sanctuaries and the declaration of open and closed fishing seasons (for conch and lobster). Two Fish Sanctuaries have been declared under this Act.

Regulations are being created for the management of the conch fishery. For the lobster fishery, the Act stipulates the size of lobsters to be caught and mesh size for nets. The fines under this Act are extremely low ranging from one hundred to one thousand Jamaican dollars.

A Fisheries Bill has already been drafted to replace the Fishing Industry Act (1975); the 1976 Regulations; sections of the Wild Life Protection Act dealing with fish; and the Morant and Pedro Cays Act. The Morant and Pedro Cays Act provide a licensing system for fishing and prohibit the killing of turtles and birds on the Cays.

The Fisheries Bill addresses fishery management plans, declaration of fishery management areas around the island and the establishment and operation of aquaculture facilities. It will also include provisions for conservation and management measures and licensing of all fishing activities to ensure enforcement of the controls. This Bill is currently being reviewed.

### 2.1.7 Endangered Species (Protection, Conservation and Regulation of Trade) Act, 2000

The Endangered Species Act provides for the conservation, protection and regulation of trade in endangered species. The Act was prepared to allow the Government of Jamaica to fulfil its obligations under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

There are four Schedules. The First Schedule governs endangered species that are threatened with extinction and which may be affected by trade. The Second Schedule governs species which could become extinct if trade is not regulated. The Third Schedule governs species which any contracting party wishes to regulate within its own jurisdiction. The Fourth Schedule is particular to Jamaica and lists Jamaican indigenous species. Domestic trade in these endangered species is controlled under the Regulations.

### **2.1.8 Other Legislation Relating to Biodiversity**

There are several other Acts that relate to the preservation/conservation of Jamaica's biodiversity (see Table 4).

#### **2.1.8.1 Town and Country Planning Act, 1948 (amended in 1999)**

Substantial amendments were made to the Town and Country Planning Act in 1999 to provide for effective enforcement. The Act is currently being revised to provide a more comprehensive control over planning in Jamaica.

The objective of this Act is to ensure the orderly development of land. This is achieved through Development Orders which are legal documents used by the planning authorities to *inter-alia* provide for protection of amenities and conservation and development of the resources of the prescribed area. Development Orders are the main means of control of land use in Jamaica.

Presently the entire island is not covered by Development Orders. Existing orders are not updated regularly. In areas covered by a Development Order planning permission is required from the local authority or from the Town and Country Planning Authority if the area is "called in" or if the development does not conform to the zoning in the Development Order. In considering development applications the planning authorities take into account the Development Order and other material consideration.

The Act also provides for the making of Tree Preservation Orders (Section 25) whereby a local authority may seek to preserve trees or woodlands in their area and prohibit wilful damage or destruction of trees, or require the replanting of trees. The Act provides for notification of, designation, and the right to submit objections to the declaration of such an Order including provisions for compensation. These Orders are not widely used.

#### **2.1.8.2 The Mining Act, 1947 (amended in 1988)**

The Mining Act regulates mining activities in Jamaica and establishes that the rights to minerals belong to the Crown. Licences to extract minerals from Jamaica are granted by the Mines and Geology Division. Under the Act and its associated Regulations, the holder of a mining lease is required to restore all mined lands to at least the level of agricultural or pastoral productivity or of suitability for afforestation, which existed before mining. However, the penalties for non-compliance are low and this has affected the performances of mining licensees.

Under Section 9 of the Mining Act, the Minister by Gazette may declare an area, for which there is no existing licence or mining lease, to be closed to prospecting and mining. Such areas or sections of the area may be re-opened by Gazette, with terms and conditions related to prospecting or mining.

#### **2.1.8.3 The Quarries Control Act, 1983**

The Quarries Control Act was amended in 1994. The Act provides for the establishment of a Quarries Advisory Committee (Section 6) to designate quarrying zones and to license operators. It makes provisions for written notices to be served on persons operating quarries if the operation is detrimental to the fauna and flora of the neighbourhood (Section 29). Where illegal quarrying activities exist the Court may order that any fine imposed under the Act may be directed towards the rehabilitation of the illegally operated quarry.

#### **2.1.8.4 Water Resources Authority Act, 1995**

The Water Resources Authority Act was promulgated to regulate and manage the abstraction and allocation of water resources through the establishment of the Water Resources Authority. The Act also governs the preservation of water quality and the conservation of such resources. The Authority is required to gather data on the quantity and quality of water in above ground and underground resources. A Master Plan, as required under the Act, has been developed to allow the proper management of such resources. It evaluates and recommends how Jamaica should use its water resources. A licensing system is in place to govern the allocation of water resources.

## **2.2 The Jamaican Constitution**

The Constitution protects property rights and establishes the principles on the ownership of property in Jamaica. The legal status of owned

property applies to the ownership of flora and fauna in Jamaica. The proprietor owns all flora on his/her property and if he/she catches wildlife on his/her property (subject to the Wild Life Protection Act) then he/she owns these wild animals.

The Constitution prohibits the taking of property by compulsory acquisition. However, it provides exceptions including taking possession of property to prevent activities injurious to the health of animals and plants and, where necessary, for carrying out an investigation for the conservation of natural resources.

**Table 4** Other biodiversity related legislation

Other Legislation	Impact on Biodiversity
Animals (Disease) and Importation Act, 1969	Allows for controlling the spread and treatment of diseases within the island via importation controls on animals, and the eradication and disposal of infected animals or where such infection is suspected.
Black River (Upper Morass) Reclamation Act, 1941	Empowers the Black River Drainage and Irrigation Board to regulate and maintain water courses and damming structures; keep the Black River clean, clear and navigable to a certain point; and can require landowners to clean canals, trenches, etc. located on their lands.
Clean Air Act, 1964	Makes provision for the prevention of the discharge of noxious or offensive gases into the air including fumes and dust from alumina, cement, lime, petroleum and gypsum works.
Harbours Act, 1874	Regulates activities within harbours through the Marine Board by regulating the movement of boats and vessels in harbours, channels or approach thereto; the placement of buoys and removal of sunken structures from harbours; penalties for depositing refuse and waste matter from vessels; and removal of sand, stone, ballast, etc., from harbours, reefs or shoals.
Institute of Jamaica Act, 1978	Promotes Literature, Science and Art, with responsibility for national museums.
Jamaica National Heritage Trust Act, 1985	Establishes a statutory body to protect Jamaica's national heritage, including any place, animal or plant species or object/building.
Litter Act, 1985	Defines what constitutes litter on private and public property and prescribes penalties for offences against the Act and the provision of receptacles for proper disposal.
Local Improvements Act, 1914	Governs all development of lands within Kingston or other such Ministerial prescribed areas via the requirement for subdivision approval from the relevant local authority.
Morant and Pedro Cays Act, 1907	Affirms the status of the Morant and Pedro Cays and prohibits fishing inside certain limits, slaying or catching of birds on the Cays or the catching of turtles within the territorial limits of the Cays.
Petroleum Act, 1979	Vets all petroleum in the State and makes provisions for the creation of Regulations which prevent pollution and orders remedial action where this takes place, as well as the protection of fishing, navigation, etc.
Plants (Importation) Control Regulation, (1997)	Outlines the role of the National Biosafety Committee in monitoring and regulating the importation of Living Modified Organisms for research only.
Plant Quarantine Act, 1993	Provides protection for Jamaica's flora from imported diseases or pests transported via plants, plant products, and soil or via other means as well as the course of action to be taken when these are discovered within the island.
Public Health Act, 1985	Allows for the establishment of Local Boards to regulate activities carried out in private or public buildings or properties where such activities prove injurious to public health
Urban Development Corporation Act, 1968	Establishes the Urban Development Corporation as a statutory body, which has amongst its functions the duty to carry out construction, maintain public parks, car parks, etc. in such manner to ensure preservation of architectural or historical objects or sites.

Source: Natural Resources Conservation Authority, 1999

## 2.3 International Agreements

Environmental management in Jamaica is guided not only by national policies and legislation but also by several international and regional agreements. The island's commitment to a number of international agreements relating to biodiversity is shown in Table 5.

### 2.3.1 Convention on Biological Diversity

The Convention on Biological Diversity creates the framework for Parties to implement national legislative, policy and administrative measures. The Government of Jamaica intends to fully implement the provisions of this Convention by carrying out the necessary legislative changes required to fulfil our obligations.

**Table 5** International/regional agreements to which Jamaica is a Party\*

Instrument	Status
International Plant Protection Convention, Rome, 1951	Accession: 24 November, 1969
United Nations Convention on the Law of the Sea, Montego Bay, 1982	Ratification: 21 March, 1983
Convention Concerning the Protection of the World Cultural and Natural Heritage, Paris, 1983	Acceptance: 14 June, 1983
Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, Cartagena de Indias, 1983	Ratification: 1 May, 1987
Protocol Concerning Cooperation in Combating Oil Spills in the Wider Caribbean Region	Entry into Force: 1 May, 1987
Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (as amended), London, Mexico City, Moscow [Washington], 1972	Ratification: 22 March, 1991
International Convention on the Prevention of Pollution from Ships, London, 1973	Ratification: 13 June, 1991
Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, London, 1973	Ratification: 13 June, 1991
London Amendment to the Montreal Protocol on Substances that Deplete the Ozone layer, London	Ratification: 31 March, 1993
Vienna Convention for the Protection of the Ozone Layer, Vienna, 1985	Accession: 31 March, 1993 Entry into Force: 29 June, 1993
Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal, 1989	Instrument of Accession Deposited: 6 January, 1995 Effective: 5 April, 1995
United Nations Framework Convention on Climate Change, New York, 1992	Instrument of Accession Deposited: 6 January, 1995 Entry into force: 5 April, 1995
Convention on Biological Diversity, Rio de Janeiro, 1992	Instrument of Accession Deposited: 6 January, 1995 Entry into force: 5 April, 1995
Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES)	Accession: 23 April, 1997 Entry into Force: 22 July, 1997
The Copenhagen Amendment to the Montreal Protocol on Ozone Depleting Substances.	Accession: 7 November, 1977 Entry into Force: 4 February, 1998
Convention on Wetlands of International Importance especially as Waterfowl Habitats (RAMSAR Convention)	Accession: 7 October, 1997 Entry into force: 7 February, 1998
Convention to Combat Desertification	Accession: 12 November, 1997 Entry into Force: 16 March, 1998

\*Source: Ministry of Land and Environment, 1999

## 2.4 National Policies and Strategies

The policies and strategies that guide Government action in the conservation and sustainable use of biological resources are outlined in the following sections.

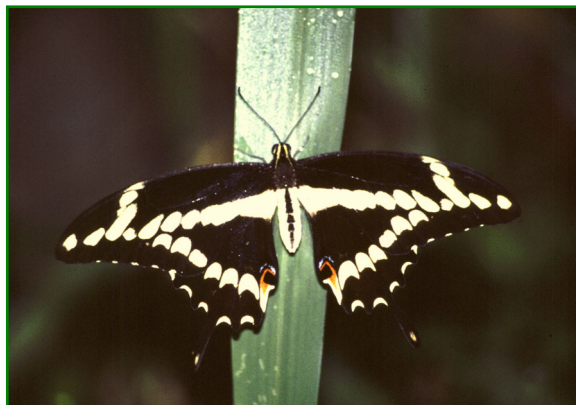
### 2.4.1 Jamaica National Environmental Action Plan

The first Jamaica National Environmental Action Plan (JANEAP) was prepared by the GOJ in 1995. The Plan highlights the major environmental problems facing the country, as well as emphasising and establishing the necessary corrective measures to be undertaken by various Government agencies, ministries and non-governmental organisations.

The Action Plan recognises that there are increasing threats to Jamaica's biological resources due to habitat degradation, pollution and unsustainable levels of utilisation. It states specific actions that have been and will be undertaken by Government and the private sector towards the development and management of a system of protected areas and sustainable use of biological resources.

The Sustainable Development Planning and Policy section of the JANEAP focuses on integrated watershed system, forest, marine and terrestrial resources, and the economic sectors such as agriculture, industry, mining, and tourism.

The JANEAP is updated every three years and status reports are prepared annually. Three Status Reports have been prepared and JANEAP 1995 has now been updated to JANEAP 1999-2002.



Jamaican Swallowtail (*Papilio thoas melonius*)

### 2.4.2 Jamaica National Industrial Policy, 1996

The National Industrial Policy was developed by the GOJ to focus on issues of investment, productivity and growth. After an extensive consultation

process, this document was presented to the nation to provide the necessary basis for a clear, coherent and consistent set of policies to guide the economy on a path of renewed growth and development into the 21<sup>st</sup> century. The Policy states that environmental management plays an important role in industrial development by ensuring the implementation of cleaner production and the appropriate standards.

### 2.4.3 Jamaica National Land Use Policy 1996

The comprehensive National Land Use Policy was developed after an assessment of the physical resource and socio-economic needs of the country. This assessment underscored the need for a more complete understanding and appreciation of the finite nature of land resources and advocacy for its sustainable use.

This Policy establishes the framework for the planning, management and development of Jamaica's resources. It takes into consideration that Jamaica, including the foreshore, territorial waters and exclusive economic zone is a finite resource and a national asset. This asset must be used for sustainable development of the island.

### 2.4.4 Policy for Jamaica's System of Protected Areas, 1997

After an extensive consultation process, this Policy was adopted by the GOJ as the official policy framework for the establishment of a National System of Protected Areas. The Policy is of paramount significance to the implementation of the CBD, since the establishment of protected areas may be one of the most effective mechanisms to support the conservation of Jamaica's biodiversity.

The goals of the Protected Areas Policy encompass issues related to sustainable resource use, public education, environmental conservation, economic development, recreation, public participation, local responsibility and financial sustainability.

The successful implementation of the Protected Areas Policy will depend on the co-ordination of policy, planning and implementation among the agencies with responsibility for the different types of protected areas. The following documents have been prepared for implementation: Black River Protection Area Management Plan; St. Elizabeth Environmental Policy Framework; Palisadoes/Port Royal Environmental Policy Framework and draft guidelines.





A flock of Royal Terns (*Thalasseus maximus*) in the foreground and Sooty Terns (*Sterna fuscata*) on the background and in the air on the Middle Morant Cays.

©National Environment and Planning Agency

#### 2.4.5 National Physical Plan, 1978

The National Physical Plan was developed to foster orderly development in the country. It focuses on physical planning, settlement, conservation, income generators (i.e. forestry and fisheries, agriculture, mineral industries, tourism and manufacturing) and public utilities through the use of Development Orders.

There are six Confirmed Parish Development Orders, four Confirmed Development Orders, six Confirmed Coastal Orders and thirteen Petroleum Filling Station Orders.

Parish Development Orders are still required for Hanover, St. Catherine; Kingston and St. Andrew; St. Mary; Portland; St. Thomas; and St. Elizabeth.

#### 2.4.6 Forest Policy, 2001 (updated Forest Land Use Policy, 1996)

The Forest Policy was completed in March of 2001 and approved by Cabinet in July of that year. The preceding Policy dealing with forest issues, the Forest Land Use Policy of 1996 was revised as a result of the realisation that it needed to be updated to fall in line with the tenets of the National Forest Management and Conservation Plan of 2001. The Forest Policy attempts to ensure the sustainable management of the island's forests by concentrating on certain priority areas namely the conservation and protection of forest areas, the sustainable management of the island's forestlands and by extension its watershed areas. It goes further to outline the strategies and tools required for implementation as well as incorporating the state run agencies whose mandates include forestland management. This list included but was not limited to the

Forestry Department, the National Environment and Planning Agency, the Commissioner of Lands, the Water Resources Authority and the Rural Agricultural Development Authority. The Policy recognised that planning and monitoring of the sector is a necessity and concludes that this can best be achieved through the implementation of the National Forest Management and Conservation Plan.

#### 2.4.7 Ocean and Coastal Zone Policy

The Ocean and Coastal Zone Management Policy for Jamaica was finalised in 2002. The policy recognizes the need for integration of all stakeholders in the decision-making processes for the sustainable use and management of national coastal and ocean resources.

The aim is to enhance the contribution of economic sectors to the integrated management of coastal areas and to integrate sectoral policy and planning into coastal area management. The approach taken includes enhancing national institutional capacities for integrated coastal management, integrating planning and management of fisheries, agriculture and forestry into coastal area management; and preventing and controlling environmental degradation in coastal areas.

The Action Plan, appended to the Policy, provides an outline of necessary actions, within the next 5 years, towards the implementation of the policy priorities.

#### 2.4.8 National Forest Management and Conservation Plan (NFMCP)

The NFMCP was approved by Cabinet in March 2001. Though similar in some respects to the Forest Policy, the NFMCP sought to provide a more detailed outline of all facets of forestry in Jamaica. The Plan was divided into three sections; the first part provide a background to Jamaica's forestry sector examining land use and ownership issues, the forestry productive sector, and the various forest management constraints that affect the functioning of the Forestry Department. Part two addressed the forest values to society, while Part three dealt with the strategies for implementation of the NFMCP. Implementation of the plan will require the involvement of the public in general and more specifically the communities bordering the forested areas, forest research, forest protection, forest production and the impact that investment and the provision of incentives could have on the

sector, as well as the role of the Forestry Department.

#### **2.4.9 Management and Recovery Plans for Endangered Species**

Management and recovery plans for endangered species have been completed over the last few years. These include: the Crocodile Action Plan; the Giant Swallowtail Butterfly Recovery Action Plan; the Jamaican Iguana Conservation Strategy; the Sea Turtle Recovery Action Plan; the Jamaica Coral Reef Action Plan; and the Plan for Managing the Marine Fisheries of Jamaica. In addition, management plans have been developed for other, non-threatened species such as the Sooty Tern and the Brown Noddy.

These policies and action plans:

- identify projects and programmes to protect species which are endangered and threatened;
- seek to mitigate adverse impacts on and the destruction of habitats across the country;
- aim at changing behaviour and educating the public on aspects of biodiversity; and
- recommend increased means of protection under the law for our natural resources and the environment.

#### **2.4.10 Access to Genetic Resources and Fair and Equitable Sharing of Benefits**

Bioprospecting and the use of genetic resources in biotechnology open up a wealth of potential uses, particularly in agriculture, the pharmaceutical industry, botanical medicine, and the cosmetic industry. There are currently no legislative or policy measures on access and benefit sharing of genetic resources in Jamaica.

Recognition of the importance of genetic resources to local industries will give urgency to the conservation of these resources for future sustainable use. At present there is very little research being carried out on genetic resources in Jamaica.

#### **2.4.11 Future Initiatives**

##### **2.4.11.1 Biosafety**

The National Biosafety Committee (NBC) was formed in 1996 with a mandate to develop clear procedural guidelines for the importation of transgenic plants for experimental use. In 1997, through the efforts of the National Commission on Science Technology (NCST) and the NBC, regulations were gazetted under

the Plant Quarantine Act to permit entry of transgenic plant material for contained experimentation.

The NBC is uniquely placed to monitor and control the importation and the use and handling of genetically modified organisms in Jamaica; however, to effectively fulfil its mandate, an appropriate national policy is necessary. The Government of Jamaica, through the NCST, has recently mandated the preparation of a National Biosafety Policy to guide the safe transfer, handling and use of the products of biotechnology.

##### **2.4.11.2 Traditional Knowledge**

Much traditional knowledge exists in Jamaica for the different uses and properties of local genetic resources. If this knowledge is not preserved and access regulated it might be lost or be entered into the public domain, which could diminish its value. However, the obligation to protect and preserve this traditional knowledge has not been addressed in any systematic manner and there is no standard definition of what traditional knowledge should include.

There is a need for the protection of traditional knowledge through national policy and legislation to ensure equitable access and benefit sharing.

##### **2.4.11.3 Draft Policies and Guidelines**

There are various draft policies that have been prepared concerning the conservation and sustainable use of Jamaica's biodiversity. These policies are primarily sectoral in nature and include:

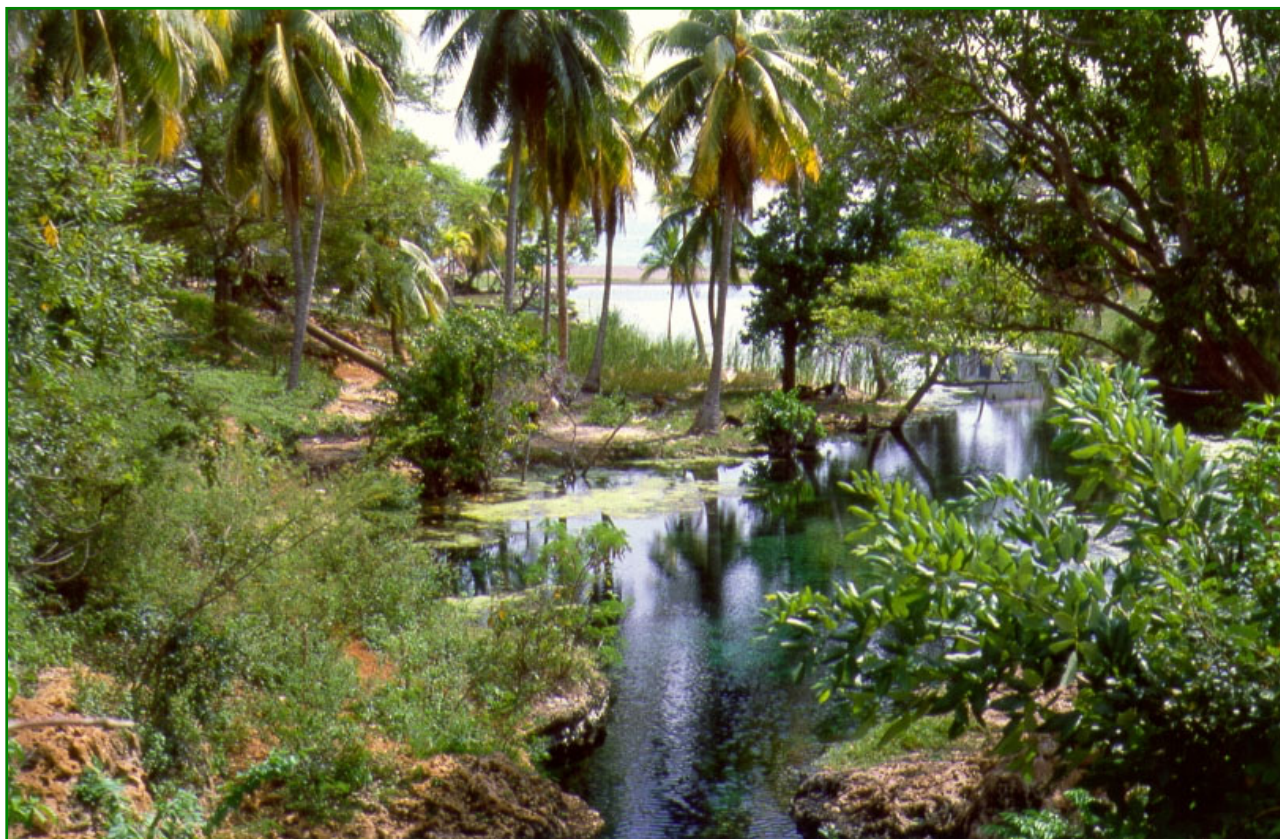
- Watershed Policy
- National Policy and Strategy on Environmental Management Systems
- Draft policies on mangroves and coastal wetlands, coral reefs, protected animals in captivity, orchids, seagrass protection, and mariculture.

Several draft guidelines are also being considered including:

- Protected Areas Management and Operation Plans
- Delegation and Compliance
- Integrated Pest Management
- Protection of Private Lands
- Disaster Preparedness and Natural Disaster
- Human Resources Management
- Fire Management
- Financing and Land Acquisition
- Resource Users and Special Users

- Research

There is currently no policy governing the protection of rivers and caves or offshore cays.



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The scenic view of the Guts River, Clarendon