



This Policy was developed by the Forestry Department of Jamaica 173 Constant Spring Road Kingston 8 www.forestry.gov.jm

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Cover image: Participants take part in Forest Trek, a recreational forestry activity staged annually by the Forestry Department (Forestry Department).

"The task that now faces Jamaica is a steep one: we must put back the trees on the land. It is not a job that should be left to the Forestry Department alone. It is the responsibility of each and every able bodied Jamaican to join in this national effort to recapture the fast disappearing beauty of our country and thus ensure the stability of our remaining rivers".

Norman Bertram Vickers Forestry Department, 1968



Jimbilin fruit (Patrick Talbert, 2008).

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The Forestry Department encourages community forestry through regular meetings with its Local Forest Management Committees (Forestry Department).

Minister's Message



Hon. Robert Pickersgill, MP Minister of Water, Land, Environment and Climate Change

There is no doubt that the protection and preservation of our natural resources including our forest cover is absolutely critical, if Jamaica is to have any kind of sustainable future. Indeed, our forests are irreplaceable and are as important to us as the very air that we breathe.

Thirty percent (30%) or three hundred and thirty five thousand nine hundred and fifteen (335,915) hectares of Jamaica's land mass has been classified as forests. However, the country loses approximately 350 hectares of forests every year.

This Government is acutely aware of this fact and is determined to aggressively pursue programmes, projects and policies aimed at preserving and protecting our forest cover.

At the heart of this thrust is the development of a new Forest Policy for Jamaica which I am pleased to say has been finalised during my tenure as Minister of Water, Land, Environment and Climate Change.

This comprehensive document, developed by the Forestry Department, builds on the previous Forest Policy (1996) and its subsequent amendments in 2001. It is an important guide for the Sector as it encapsulates the visions, goals and priorities of this administration in relation to how our forested areas are utilized, and outlines what must be done to conserve, protect and where necessary, re-plant our forests.

The new Forest Policy also provides a blueprint on where we are currently, and where we need to go to ensure that we meet our sustainable development goals, and that our natural resources including our forests will be preserved so that Jamaica may indeed become the "place of choice to live, work, raise families and do business," now, and for future generations.



Blue Mahoe, Jamaica's national tree (Forestry Department).

Robert D. Pickersgill M.P.

Executive Summary

Jamaica is known as the land of wood and water, taken from the Tainos (earliest indigenous inhabitants of Jamaica) word "Xaymaca". Forests are a part of Jamaica's famous beauty, they provide food and wood, are a home to plants and animals some of which are only found in Jamaica, and are a place to enjoy with our families. The country's forest resources provide tangible and intangible services, as they support livelihood opportunities for many border communities; are a source of energy and non-timber products; provide vital ecosystem services which include continued access to clean air and water and reduce the effects of land degradation and climate change.

Forest policies have historically proven to be one of the strongest tools available to the regulators tasked with overseeing the management of the island's forests, with the earliest forest policy statement in Jamaica being "the Hooper Report" (1886). In more recent times, the Ministry with responsibility for the forestry sector has issued Policy statements every 5-10 years, with the 2001 Forest Policy including a number of goals which the Government continues to be committed to, and some of which have been included in this Forest Policy.

Though historically many factors have contributed to the degradation of Jamaica's forest cover several policy and regulatory deficiences are highlighted in this Policy which contribute to this phenomena. These include conversion of forest cover for mining and quarrying purposes; bushfires which are often used to clear land for agricultural activity; unauthorised occupation of land; illegal felling of trees on state-owned land; selective removal of valuable biodiversity including endemic trees; limited awareness of the value of forests and trees as part of Jamaica's cultural and ecological heritage; and insufficient monitoring of some forested areas, particularly mangroves. Jamaica's forests are part of its ecological heritage and this Policy enunciates the Government's commitment to provide a framework that will prevent degradation and promote rehabilitation of the island's remaining forests.

The Forest Policy is consistent with the Charter of Rights and is guided by, builds on, and will help to strengthen, a number of existing Acts, policies, and plans. It outlines eight principles recognized by the Government as being critical to the sustainable management of Jamaica's forests which include transparency and accountability; the utilization of sustainable development and inter-generational considerations, best science and participatory and collaborative approaches in forest management planning and implementation processes. The Policy also establishes three overarching Goals which cover ten objectives. The three Goals are related to Governance, Forest Ecological system conservation and Socio-Economic Considerations.

Although the Forestry Department is the State Agency with the mandate to manage forests in Jamaica, it currently has limited jurisdiction over privately held land with forest cover. Given that the private interests own two-thirds of the forested lands in the country, it is clear that the mandate of the Forestry Department must be expanded to facilitate the regulation of these lands.

In this regard, the new Forest Policy provides the basis on which necessary changes to the legislative and management framework can be instituted. The expansion of the Agency's jurisdiction will also include the establishment of a land trust to hold the approximately eight per cent of remaining closed broad leaf forest, in trust for the people of Jamaica.

The Policy also addresses the activities that are deemed crucial to the maintenance of a vibrant forestry sector. These include, but is not limited to the need for the development of forest management plans; mechanisms governing forest management data collection; the demarcation of jurisdictional boundaries; the regulation of (1) activities on Crown and privately owned lands, (2) the forest sector, and (3) forest-based industries.

Recognition and support of the role played by members of the public and private sectors, Non-governmental organisations, community based organisations, Local Forest Management Committees and special interest groups in the management of the island's forests, is also captured in the Policy. The need for transparent and collaborative approaches is one of the underpinning recommendations made to ensure continued sustainable management of Jamaica's forests. In the final segment of the Policy, fulsome attention is paid to the roles and responsibilities of each identified stakeholder.

The preservation and where possible, expansion of Jamaica's forest cover benefits not only local and regional interests, but as is recognized in the various Treaties and Conventions signed by the Government of Jamaica, their retention has far-reaching implications on a global level. As one of the countries projected to be severely impacted by the effects of climate change, Jamaica has a vested interest in investing in the forestry sector which can contribute to the country's efforts to mitigate and / or adapt to the effects of climate change. This Policy focuses in many respects on the direct and indirect benefits to be derived from the sustainable management of the island's forest resources and outlines particular areas of intervention which require regulation or oversight at the national level.

In developing the draft Policy, extensive consultations were held over a two-year period, that is 2011-2012, and included consultations with the stakeholder focus groups and government agencies in both Kingston and Montego Bay.

Acronyms

BSJ Bureau of Standards of Jamaica

CBD Convention on Biological Diversity

CITES Convention on International Trade in Endangered Species of Wild Flora and

Fauna

FAO Food and Agriculture Organization

GOJ Government of Jamaica

IOJ Institute of Jamaica

JBI Jamaica Bauxite Institute

JNHT Jamaica National Heritage Trust

LFMC Local Forest Management Committee

NBSAP National Biodiversity Strategy and Action Plan

NEPA National Environment and Planning Agency

NFMCP National Forest Management and Conservation Plan

NGO Non-governmental Organization

NLA National Land Agency

NRCA Natural Resources Conservation Authority

NSWMA National Solid Waste Management Authority

NTFP Non-Timber Forest Products

NWC National Water Commission

PASMP Protected Areas System Master Plan

PCJ Petroleum Corporation of Jamaica

PIOJ Planning Institute of Jamaica

RADA Rural Agricultural Development Authority

REDD+ Reducing Emissions from Deforestation and Degradation

RPPD Rural Physical Planning Division

SFMP Strategic Forest Management Plan

SRC Scientific Research Council

STATIN Statistical Institute of Jamaica

TCPA Town and Country Planning Authority

TPDCo. Tourism Product Development Company

UDC Urban Development Corporation

UNFF United Nations Forum on Forests

UNFCCC United Nations Framework Convention on Climate Change

WRA Water Resources Authority

Introduction

Jamaica's Forests

Forests are defined by the Forestry Department as:

"An ecosystem characterised by a more or less dense tree cover often consisting of stands varying in species, composition, structure, age, class and associated process and includes land which was once completely covered by forests but has been otherwise degraded or damaged".

Jamaica's forests cover approximately three hundred and thirty six thousand (336,000) hectares of land; which equates to approximately 30% of the entire island. The types of forests include -

- **88,230. 54** hectares of *Closed Broadleaf* (Closed primary forest with broadleaf trees at least 5 metres tall and crowns interlocking, with minimal human disturbance);
- 178,624.64 hectares of *Disturbed Broadleaf* (Forest with Broadleaf trees at least 5 metres tall and species-indicators of disturbance);
- 41,998.54 hectares of *Tall Open Dry* (Open natural woodland or forest with trees at least 5 metres tall and crowns not in contact);
- 12,104.02 hectares of Short Open Dry (Open scrub, shrub, bush or brushland with trees or shrubs 1-5 metres tall and crowns not in contact);
- 2,979.41 hectares of Bamboo (Bambusa vulgaris);
- 2,247.03 hectares of Swamp (Edaphic forest (soil waterlogging) with a single storey with species indicators such as Symphonia globulifera (hog gum) and Roystonea princeps (royal palm); and
- 9,731-37 hectares of Mangrove forests Edaphic forest (areas with brackish water) composed
 of trees with stilt roots or pneumatophores, species-indicators such as Rhizophora mangle
 (red mangrove).

Within each of these forests are rich ecosystems that provide habitats for a wealth of diverse endemic plant and animal species.

The Forestry Department (hereinafter referred to as 'the Agency') is mandated to ensure the protection and conservation of forests on Crown lands in Jamaica. The Agency manages approximately one hundred and nine thousand five hundred and fourteen (109,514) hectares of land of which ninety-eight thousand nine hundred and sixty-two (98,962) hectares are designated as Forest Reserves. The remaining two hundred and twenty-six thousand four hundred and one (226,401) hectares of land classified as forests, are under private ownership with no comprehensive legislative framework to govern their protection.

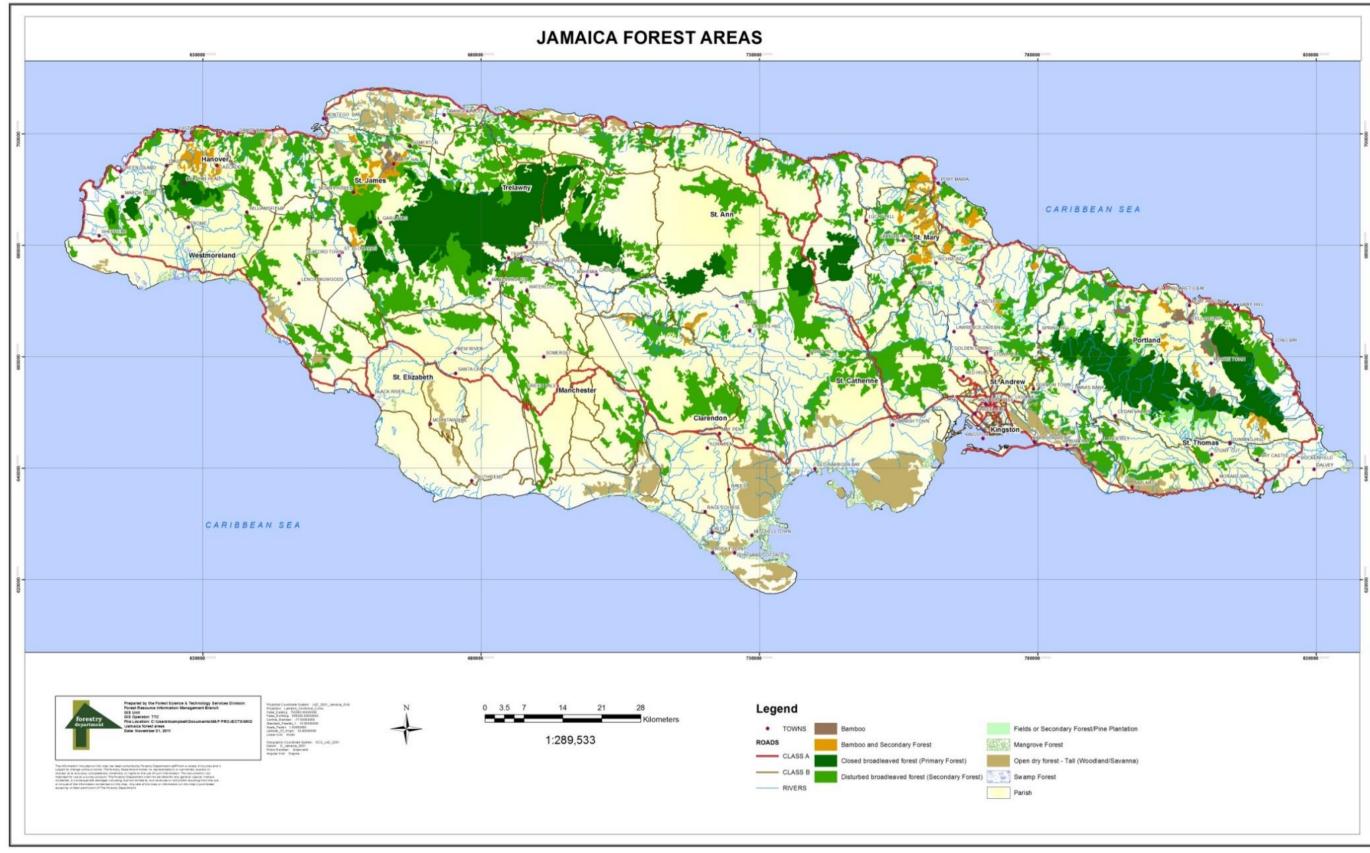
30% of Jamaica is covered by forests

Jamaica's rate of deforestation per annum is approximately 0.1% which equates to three hundred and fifty (350) hectares of forest lost per year (FAO Global Forest Resources Assessment, 2010). It should be noted that currently the reforestation rate, as a result of State funded intervention, is less than the 0.1 percent deforestation rate. On average, approximately one hundred and twenty (120) hectares of land is planted by the Agency per annum.

Many factors have contributed to the loss of forest cover over time and a number of policy and regulatory deficiences exist which have been identified as priorities to be addressed by this Policy:

- Competing land uses for bauxite mining and quarrying in areas managed by the Forestry Department, and new proposals to open up forested lands for these activities;
- Clearly discernible demarcation of Forest Estate boundaries;
- Encroachment and squatting on Forest Estates, especially for agriculture and housing purposes;
- Open access use of forests and Illegal cutting of trees on Crown lands
- Selective removal of valuable biodiversity including endemic trees;
- Insufficient take up by private landowners of opportunities to declare their land under the Forest Act and obtain property tax incentives;
- Lack of a central repository of data on the market price, supply, and demand for local timber;
- Lack of clear rules to manage traditional uses of forests and forest products and the regulation of access by communities to local forests;
- Insufficient tertiary level programmes in silviculture and forestry ecology.
- Limited awareness of the value of forests and trees as part of Jamaica's cultural and ecological heritage;
- Lack of resources to enhance the enforcement capacity of the Agency;
- Insufficient monitoring of mangrove forests across the island to prevent or reduce conversion;
- Financing for forest restoration outside of regular budgetary allocations;
- Inadequate infrastructure to develop forest appreciation, recreation, and ecotourism activities; and
- Limited capacity of many local communities to undertake co-management of Forest Estates.

Jamaica is Party to a number of international agreements and treaties which support national initiatives to decrease, and where possible reverse the loss of forest cover. These treaties and agreements include the Non-Legally Binding Instrument on All Types of Forests governed by the United Nations Forum on Forests, as well as binding instruments, such as the United Nations Framework Convention on Climate (UNFCCC), the Convention on Biological Diversity and the RAMSAR Convention on Wetlands of International Importance, and the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES).



Jamaica Forested Area's - Jamaica Forestry Department, 2011.

Forest Legislation, Policy and Plans

Jamaica's new Charter of Rights under Part III of its Constitution includes a substantive right to a healthy environment for all Jamaican citizens. The Charter of Rights provides that all citizens have

"The right to enjoy a healthy and productive environment free from the threat of injury or damage from environmental abuse and degradation of the ecological heritage".

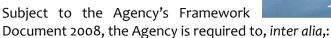
Jamaica's forests are part of its ecological heritage and the Government of Jamaica (GoJ) is committed to providing a framework that will prevent degradation of the island's remaining forests. The Forest Policy for Jamaica is consistent with the Charter of Rights and is guided by, builds on, and will help to strengthen, a number of existing Acts, policies, and plans.

The primary legislation that governs the management of forests in Jamaica is the Forest Act 1996. This law establishes the Forestry Department as the lead government entity responsible for the management of forests located on Crown lands. The goal of the Agency is to "Manage and conserve the forest resources of Jamaica for the benefit of present and future generations". The law mandates the Agency to establish rules on directing and controlling the exploitation of forest resources,

promoting reforestation, conducting research, developing and implementing education and awareness public programmes, and developing recreational initiatives in forests.

The Government of Jamaica (GOJ), as part of its Public Sector Modernisation Programme, transformed the Forestry Department on May 1, 2010 into an Executive Agency thereby making it subject to the Executive Agencies Act, 2002. As an Executive Agency, the Forestry Department is required to

deliver its services in a more efficient and effective manner to its clients, and to increase its contribution to national economic and development goals.



- Maintain the forest cover at not Mangroves (Forestry Department). less than 30% of the country's land mass
- Increase forest cover by at least 2% over the next ten years



• Transfer the local experience and technology to two other territories in the region in the first five years.

The ability of the Forestry Department to achieve the requirements as outlined above is contingent on the allocation of financial resources from the Central Government as well as other sources of funding.

Jamaica's **Vision 2030** - **National Development Plan** is the country's roadmap to sustainable development. The Plan is aimed at positioning Jamaica to achieve developed country status by 2030. It acknowledges that protecting and managing Jamaica's natural resources will contribute to enhancing the quality of life for all Jamaicans. Vision 2030 specifically mandates the Agency to implement best management practices for all forests, as well as recognizing the role it plays in ensuring adaptation to climate change while leading reforestation efforts.

The Agency's **National Forest Management and Conservation Plan 2001** (NFMCP) outlines the manner in which the GoJ will conduct activities to protect and manage the forests in Jamaica. The NFMCP was prepared to promote and improve the conservation and sustainable use of the forest resources of the country, to meet local and national needs by protecting, managing and restoring the resource for the benefit of present and future generations. The NFMCP was developed in 2001 and reviewed in 2006. This Plan, which is a requirement of the 1996 Forest Act, outlines requirements for the:

- Conservation and management of forests;
- Protection of soil, water, and wildlife;
- Creation of forest inventories; and
- Development of wood-based industries and social forestry.

The NFMCP provides a framework geared towards reducing rates of deforestation and addressing forest restoration as well as providing for the sustainable use of wood generated from forest plantations. It includes strategies on:

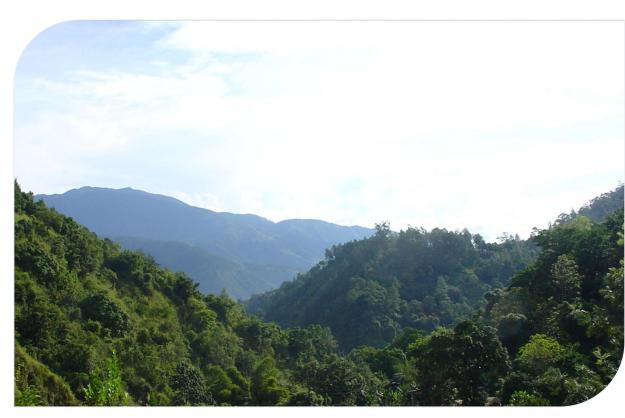
- Deforestation and forest degradation;
- Illegal and un-sustainable harvesting of timber or fuel wood;
- Illegal or excessive grazing by livestock in forested areas;
- Setting of fires that impact forests;
- Addressing non-forest uses of land with forest cover, such as mining and illegal settlement.
- Plantation development on deforested land;
- Enrichment planting of degraded natural forests, and removal of invasive species from forested areas; and
- Sustainable production of wood available from accessible plantations that is environmentally and economically suitable for harvesting.

The **Strategic Forest Management Plan** 2010 – 2015 (SFMP) sets targets by which the Agency's performance in relation to its management of Jamaica's State-owned forests is measured. The SFMP

seeks to ensure implementation of Vision 2030 and includes a number of objectives and indicators including:

- Building the Forestry Department as an efficient and effective service delivery organization;
- Increasing participation of the private sector, community based organizations, and nongovernment organizations in the sustainable management and conservation of Jamaica's forests;
- Increasing the level of public awareness regarding all issues related to forestry;
- Developing and implementing forest management plans; and
- Maintaining and restoring forest cover.

Both the NFMCP and the SFMP provide a strategic framework for the implementation of this Forest Policy and continue to provide the basis for action by the Agency.



A view of forested mountainside in Saint Catherine, Jamaica (Carole Excell, 2012).

Forest Policy

Vision

"By 2062, Jamaica's forests and its biodiversity are sufficiently restored and sustainably managed, so once again the island can adequately be described as "the land of wood and water", capable of meeting the social, economic and ecological needs of current and future generations. "

Principles

The Government of Jamaica is committed to the sustainable management of Jamaica's forest resources and recognizes the importance of being guided by the following principles in the implementation of this Policy. These principles are:

1) Transparency and Accountability

A commitment to the principles of transparent, responsive, and accountable governance, providing measures to enforce the policy and indicators for performance against desired results.

2) The Precautionary Approach

The precautionary approach will be utilised in relation to decisions taken that directly or indirectly impact forests in Jamaica. Many of Jamaica's forests contain globally or nationally significant concentrations of biodiversity and include rare, threatened, or endangered species, or are established on lands which are fundamental to meeting basic needs of local communities and special interest groups. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

3) Sustainable Development and Inter-generational Equity

Forests will assist Jamaica in achieving sustainable development for present and future generations. Forests will be conserved and sustainably managed to support the social, cultural, spiritual, economic, and environmental needs of the people of Jamaica. Appropriate measures will be developed to provide legal rights to communities and groups to use the forest and resources found within them sustainably.

4) Varied Management Approaches

Varied management approaches will be used in recognition of the different types of forests, and the need to employ techniques to ensure the maintenance of the integrity of the resources found within. This shall include but not be limited to co-management arrangements for forested Crown land.

5) Participation and Collaboration

Every attempt will be made to provide timely, reliable, and accurate information on forests, forest ecosystems, and activities that impact forests to ensure public understanding and informed decision-making. The Government will provide opportunities for the participation of interested parties, including women, local communities, industries, labour, and non-governmental organizations, in the development, implementation, and monitoring of national forest strategies and policies. Collaborative approaches to administration and policymaking in the forestry sector will be the norm.

6) Protection and Sustainable Use of Biodiversity

Jamaica's biodiversity shall be conserved and protected and access to biological resources found in forests shall be regulated appropriately to ensure sustainable use. Local knowledge regarding the conservation and sustainable use of these forest resources will be recognized and recorded.

7) Best Science

Application of sound technical and scientific principles and, where relevant, traditional knowledge will be encouraged in forest planning and management initiatives.

8) Recognising the Value of Forest Lands Goods and Services

The value of forest goods and services will be integrated into decision-making processes at the individual, corporate and governmental level. Users and beneficiaries of forest lands, and the goods and services that these provide will contribute to the true cost of forest management and conservation, including paying for costs of environmental degradation caused by unsustainable activities.

Scope and Goals

This Policy governs all forests in Jamaica whether owned by the State or by private interests. Its scope covers land with reforestation potential and forests in urban settings and addresses national priorities as well as international obligations and commitments relating to climate change, biodiversity conservation, and the sustainable use of wetlands. The Goals of this Policy can be classified under three broad headings which relate to -

- **Governance** of the forestry sector and more specifically the mandate of the Agency, other public sector entities and other interest groups in this regard;
- The **conservation and protection** of forest ecological systems; and
- Relevant **Socio-Economic** considerations

Each goal has been further sub-divided into specific elements which were identified by the stakeholders in the forestry sector as priority areas in need of attention.

Goal | IMPROVED GOVERNANCE ARRANGEMENTS IN RELATION TO THE MANAGEMENT OF THE ISLAND'S FORESTS

- a. Improve the legal and institutional frameworks for development, management, and conservation of all forests in Jamaica to achieve a no net loss of forest cover.
- b. Improve decision-making as it relates to forests within the context of other sectors as well as addressing cross-cutting issues, overlapping mandates, and conflicting policies and practices.

Goal II INCREASED FOREST ECOLOGICAL SYSTEM CONSERVATION AND PROTECTION

- a. Protect Jamaica's biodiversity, particularly "national forest treasures" of cultural, ecological, and historical value.
- b. Maintain and restore forest cover by providing appropriate incentives to support the protection, reforestation, and afforestation of forested lands to address mitigation and adaptation to climate change.
- c. Facilitate and encourage the protection and conservation of forests, particularly native and endemic species of flora and fauna found on private lands in urban and rural areas.
- d. Incentivize the preservation of standing natural forests to enhance ecosystem services, purification of air and water, carbon sequestration, nutrient dispersal, biochemical, and industrial products provided by forests.
- e. Improve transparency and accountability in the management and use of Jamaica's forest resources and enhance capabilities to ensure appropriate enforcement of Jamaica's Forest laws.

Goal III INCORPORATION OF SOCIO-ECONOMIC CONSIDERATIONS INTO FOREST CONSERVATION AND PRESERVATION

- a. Provide a broader framework to support community and public participation in the planning, policy making and management of forests which may include granting rights of use and management of timber and non-timber forest products and promoting agroforestry and social forestry programmes.
- b. Develop greater appreciation of Jamaica's forests by increasing opportunities for Jamaicans and tourists to enjoy them for recreational and leisure activities.
- c. Improve the quality of life of the people who live in close proximity to forests and rely on their resources, by supporting the development of sustainable forest-based activities that create employment and income generation.

Improving and Expanding the Jurisdiction of the Forestry Department

A. Legal, Institutional, and Management Arrangements

The Forest Act of (1996) outlines the responsibilities of the Forestry Department, the areas over which it has jurisdiction; the varied activities deemed to be offences which are prosecutable and the penalties applicable to each. In order to provide a more fulsome governance structure for the sector, the legal, institutional and management framework must be strengthened to implement the Policy.

One of the main means of strengthening the Agency will occur when its jurisdiction is expanded to include:



Forestry Department.

- Monitoring the importation and exportation of wood and identified non-timber forest products, requirements for submission of trade data on all species types;
- Development of standards for the sustainable harvesting of prescribed non-timber forest products on Crown lands;
- A specific institutional role to address climate change mitigation and adaptation.
- Protection and sustainable use of biodiversity on Forest Estates and requirements for permitting access to biodiversity and sharing of benefits with local communities;
- Promotion and monitoring of the development of urban forestry programmes and the preservation of specific trees of importance;
- Regulation of the removal of trees from an area in excess of a statutorily prescribed size in urban and rural areas;
- Promotion of the use of forests for recreational, leisure, cultural, and historical purposes;
- Implementation of enforcement strategies to guide the surveillance of state-owned forests;
- Binding the Crown to specific management responsibilities for forests;
- Certification of lawful use, monitoring and transportation of timber from private lands;
- Specification of rights of participation in planning, policy-making, and permitting processes;
- The institution of a process governing the utilization of reforestation bonds.

B. Possession of Crown Lands for Management and Use

The Agency manages lands designated under the Forest Act, as well as other parcels of forested Crown land that have not been declared to date. Based on the fact that the ownership of these parcels of land is currently vested in the Commissioner of Lands, in order to ensure that the Agency will be able to achieve the goals under this Policy, possession of select Forest Reserves and Forest Management Areas will after a reclassification exercise, be granted by the Commissioner of Lands to the Agency. The remaining parcels of forested Crown lands will remain vested in the Commissioner of Lands, and will continue to be managed by the Agency.

C. Closed Broad Leaf Forest to be Held in Public Trust for the People of Jamaica

A large percentage of forests in Jamaica are in disturbed and degraded states, and the 2001 Forest Policy recognized that only about 8% of the island can be properly described as closed broadleaf forest, with little evidence of human disturbance. In order to protect the country's unique biodiversity and allow future generations to enjoy these national forest treasures, it is important that these undisturbed forest areas are preserved and held in trust for the people of Jamaica. To build the enabling framework for forest conservation and protection of Jamaica's important biodiversity, the Government of Jamaica is committed to retaining this existing 8% of closed broadleaf forest in its natural state for the benefit of existing and future generations.

D. Classification of Jamaica's Forests

For the purpose of conservation and management, forests are classified to indicate permitted uses and the management structures which will govern the utilization of these areas. Forests whether owned by the State or privately held, can be imbued with a legislatively prescribed layer of protection under the Forest Act 1996 as (i) *Forest Reserves*, (ii) *Forest Management Areas*, and (iii) *Protected Areas*. Forested Crown lands have been gazetted as Forest Reserves and Forest Management Areas under the Forest Act, National Parks and Protected Areas under the Natural Resources Conservation Authority Act 1991 and Game Sanctuaries under the Wildlife Protection Act 1945. The multiplicity of different classifications raises the possibility of uncertainty in relation to management goals, responsibilities, and permitted activities.

The classification of the permitted uses for forest reserves versus forest management areas will be streamlined as follows:

Forest Reserves

Forests which may only be utilised for the following purposes:

- Conservation of natural forests and biodiversity;
- Use for highly regulated eco-tourism and recreational activities; and
- Scientific research including sustainable management of forest resources.

Forest Management Areas

Forests which may be utilized for the following purposes:

- Economic development of forest products on plantations for extraction or timber production;
- Generation of non-timber forest products;
- The preservation of landscape diversity including forests on steep slopes;
- The promotion of agro-forestry;
- Sustainable management of mangrove forests;
- Conservation of soil and water resources;
- Management of urban forests for the use of the public;
- Development of nature tourism and recreational amenities; and
- Extraction of minerals under strict permit conditions

Each category will be defined within regulations with a list of uses for which each area has been designated. This may require that some areas currently gazetted as Forest Reserves be redesignated as Forest Management Areas by Order under the Forest Act. The designation of Protected Areas under section 23 of the Forest Act is to be removed as it is redundant taking into consideration the new designations and zoning criteria. Within the two categories of designation, namely the Forest Reserve and Forest Management Area, the Agency may zone forests for one or more following uses:

- 1) **Community Forests**: Forests where Local Forest Management Committees, Community groups, Service clubs may via an agreement with the Agency be given certain rights to conserve, manage, and sustainably use forests and non-timber forest products to support livelihoods, increase amenity and provide recreational space.
- 2) Commercial Forests: Forests on Crown or private lands utilised to make a profit.
- 3) Private Forests: Forests where trees and land are managed and owned by private land owners.
- 4) **Urban Forest**: Forests designated in urban areas for planting, care and management for their contribution to the well-being of urban society by private organisations, individuals and/or Government.
- 5) **Agro Forests**: Agricultural lands which use inclusive arrangements to integrate planting of trees with other crops and include harvesting and reforestation for profit.
- 6) **Riparian Forests**: These are forests which are zoned to protect water sources (e.g. springs, rivers,) and catchment areas.
- 7) **Forest Restoration Areas:** These are degraded lands suitable for forest restoration and afforestation to prevent erosion of soil with incentives to ensure their use.
- 8) **Research Forests:** These are forest areas designated for scientific research, educational purposes, and protection, and conservation of flora and fauna.

E. Funding Mechanisms for Forestry Management and Conservation

A long term solution for the financing of forestry management and conservation programmes is needed. The maintenance and expansion of the island's forest cover requires access to a consistent stream of funding for specific uses such as the reforestation of denuded upper watershed areas. Non-governmental organisations and LFMCs also need to be supported to develop appropriate capacities to conduct management activities and access revenue generation opportunities in the Forest Estate.

The Regulations under the Forest Act provide for the establishment of a Forest Fund. The Fund though intended to support reforestation and forest conservation, has not been capitalized to date. These Regulations provide that the Fund may be used for reforestation; watershed management, and sustainable forest management; public recreation and nature conservation; carbon conservation projects; forest adaptation and mitigation measures; and grants to owners and tenants of land for tree planting and forest management. The Forest Fund could be used as a financing mechanism for reforestation programmes and to support new initiatives.



Cotton Tree (Patrick Talbert, 2008).

Activities that are Part of the Mandate of the Forestry Department

A. Improving Forest Management Information

To ensure the sustainable management of Jamaica's forests, decision making must be informed by the principles of sound science. This requires that a centralised repository of discrete sets of data on the status of the island's forest (inventory) be maintained, and that the ability to monitor changes and establish forest carbon content to effectively tackle deforestation and degradation of forests, is entrenched at the very least in the Forestry Department. It is recognized that the use of Geographic Information Systems (GIS) is a critical tool to enable the Agency to carry out its mandate in this area. In addition, reporting mechanisms and indicators of success will be developed. Data collection will include but not be limited to the following areas:

- Analysis of the ecosystem services provided by the forest estates including the determination of the economic value provided by these services;
- Biophysical attributes and species inventory on priority sites;
- Development of indicators to monitor compliance with the no-net-loss of forest cover policy on Crown lands and
- Vulnerability assessments of forested areas detailing the risk of flooding, run-off, soil erosion, and fire.

B. Addressing Climate Change through Reforestation, Afforestation and Preventing Degradation of Forests

Forests in Jamaica have an important role to play in mitigating the effects of climate change. They provide great opportunities for adaptation by increasing resilience and providing favourable options for people and ecosystems. They also have significant mitigation potential, particularly as carbon sinks. Reforestation of degraded landscapes is one of the major objectives of the SFMP. Reforestation measures can assist in the mitigation of climate change and adapting to its impacts. The UN Framework Convention on Climate Change (UNFCCC) has introduced a mechanism for "reducing emissions from deforestation and degradation (REDD+). The REDD+ mechanism seeks to provide incentives for developing countries to reduce emissions from deforestation and forest degradation, the conservation, sustainable management of forests and the enhancement of carbon stocks.

The Framework Document creating the Agency requires the maintenance of not less than 30% of the country's land mass as forest, that is, approximately 336,000 hectares. The Government is committed to maintaining existing forested Crown lands and ensuring a 'no net loss' of forest cover and through the various initiatives facilitated by the Agency, increase the area of forest cover by at least 2% over the next 10 years. This would require, inter alia, (i) the initiation of specific activities geared towards preventing the conversion of forests to non-forested areas (deforestation) thereby maintaining the carbon stock, (ii) instituting re-planting programmes, and (iii) the development of a portfolio of activities to engage in REDD+. The Government is currently assessing the possibility of accessing REDD+ funding under the UNFCCC.

C. Development of Forest Management Plans

The Forest Act identifies the need for the development of Forest Management Plans for declared Forest Reserves and Forest Management Areas and this approach is supported in the Strategic Forest Management Plan (SFMP) which acknowledges that these Plans have to be designed to achieve consensus and allow for practical management. Forest Management Plans can actively target and seek to prevent deforestation and land degradation and highlight the potential opportunities for the sustainable management of the natural resources found in the relevant reserve or management area.

D. Conservation and Sustainable Use of Biodiversity

Jamaica is a party to the Convention on Biological Diversity (CBD) which is geared towards conserving and promoting the sustainable use of biological diversity, and ensuring fair and equitable benefit sharing of these natural resources. Jamaica is rated fifth in islands of the World in terms of endemic plants and its forests are important repositories of this biological diversity. Jamaica's National Biodiversity Strategy and Action Plan (NBSAP) indicates that at "least 3,304 species of plants occur in Jamaica" of which 923 (27.9%) are endemic.

The CBD also makes reference to 'Forest Biodiversity' which it defines as a broad term inclusive of all life forms within forested



Forests play a vital role in the preservation of watersheds (Forestry Department).

areas and the ecological roles they perform. As such, forest biological diversity encompasses not just trees, but also a multitude of plants, animals and micro-organisms that inhabit forest areas and their associated genetic diversity. The main factors associated with the decline of forest biological diversity are of human origin. The most important factors are conversion of forests, agricultural land, overgrazing, unmitigated shifting cultivation, unsustainable forest management, introduction of alien invasive species, infrastructure development, mining and oil exploitation, anthropogenic forest fires, pollution, and climate change all impact negatively on forest biological diversity.

The protection afforded by the Forest Act and the Forest Regulations allows for the control of the removal of forest produce from forested lands; to designate specific areas for research; and requires that written permission be acquired to catch and collect any wildlife in a forest estate or protected area (Section 38). The Forest Act provides that the Conservator of Forests may, *inter alia*, establish, vary, or cancel standards and operational procedures for the implementation of forest practices with respect to 'biological diversity', 'silviculture', 'botanical forest products', and 'forest research'. Priority will be given to the continued protection of the island's unique biodiversity.

E. Demarcation of Jurisdictional Boundaries

The demarcation of boundaries of Forest Reserves and Forest Management Areas is essential for the verification of forest inventories, to prevent encroachment, for monitoring and enforcement purposes, and the implementation of public awareness initiatives. The majority of Jamaica's Forest Reserves have been prescribed using legal descriptions and monuments not surveyed boundaries and readily identifiable markers. In this regard, priority will be given to the delineation of boundaries for Forest Reserves which are identified as being continually under threat of encroachment.

F. Major Threats to Forests

A number of threats affect the integrity of forests in Jamaica in various ways.

- Mining and quarrying
- Bushfires which are often used to clear land for agricultural activity;
- Domestic animals that are allowed to graze in forested areas;
- Natural disasters such as hurricanes;
- Insect pests and diseases which can decimate entire areas or species;
- Illicit logging/theft of timber species and non-wood forest products;
- Utilization of forest reserve land for subsistence and commercial agriculture, which often leads to fragmentation in the long-term.

These threats can harm the national forestry sector, communities and threaten the survival of specific species. The Government remains committed to protecting the island's forests against these threats.

G. Assessment of Incentives

Almost two-thirds of Jamaica's forests are privately owned. Private owners of forest lands can contribute to the stewardship of forest resources on the island but it is recognized that without deliberate action, the quantity and quality of forest cover on private lands will decline. A continued priority of the Government is to develop appropriate incentives to encourage private land owners to retain standing forests; engage in reforestation practices; conduct habitat enhancement activities, and prevent soil erosion. Incentives already exist for private landowners to obtain property tax relief on an annual basis by declaring their land under the Forest Act, which is then governed by and subject to a forest management plan.

The private sector has a much greater capacity to meet national reforestation requirements than the Government. The 2001 NFMCP identified 69,244 hectares of forested or partially forested land with reforestation potential, only 2,190 hectares of which are within government owned Forest Reserves. It is recognised that a radical shift is only possible if incentives meet the needs of private land owners who may have divergent interests based on the size of lands owned, tax structures affecting land owners, and their individual future needs.

H. Regulation and Management of Forests on Crown Lands

A number of government agencies in Jamaica have a central role in the development, control and land use planning on Crown lands. Agencies responsible for mining, agriculture, energy, and housing all are given jurisdiction to make plans for the use of Crown lands under their mandate. The Agency's mandate includes avoiding the loss and conversion of forested Crown lands and using these lands to protect natural resources whilst encouraging the use of the principles of sustainable development.

Improvements are needed in land use coordination and the sharing of current land use plans, leases, and permit information. Conflicts in land use need to be identified and assessed along with the legitimate interests of different stakeholders. All Government Agencies will have to abide by the Forest Management Plans governing the various forest reserves and forest management areas once the Forest Act is amended to make all of its provisions binding on the Crown.

I. Regulation and Management of Trees on Private Lands

The regulatory processes governing the removal or cutting of trees from privately owned land do not currently include the entity with the technical expertise in forestry, namely the Forestry Department. The Agency does not currently have the mandate to grant or refuse a permit to cut or otherwise remove trees from private lands and the implication of this gap is that the Agency will not be able to ensure retention of 30% forest cover on the island. Therefore, the Policy recognises that the removal of trees from private lands requires the incorporation of comprehensive regulatory and monitoring mechanisms within the Forest Act and its subsidiary legislation.

J. Regulation of Commercial Forests and Forestbased Industries

It is recognized that increased regulation of the commercial forestry sector is required to coordinate the amount and types of permitted forest-based industries with the available supply of raw materials as determined by the annual allowable cut. This requires an evaluation of the size of the commercial sector as well as the provision of appropriate valuation and yield data for commercially valuable species to investors interested in establishing forests over the long term.



To encourage the development of forest-based industries, the following information must be available:

- An established annual allowable cut in accordance with Section 14 of the Forest Act for Crown and private lands.
- Appropriate studies on the local consumption of timber, the demand and supply of timber and the potential for commercial timber use.
- Policy documents governing the utilization of timber and non-timber forest products on a sustainable basis.
- Yield data for prescribed forest species designated for commercial use.
- Register of licensed sawmill operators.
- Regulation of the export of timber, wood products and non-wood forest products in association with the Customs Department and other agencies.

The Forestry Department conducts periodic inventories of timber, and non-timber resources found in some of the forest plantations and natural forests it oversees. This data underpins the Agency's decision making processes regarding the sustainable use of trees and non-wood products from these forests, and the development of standards for forest–based industry on Crown and private lands.

K. Support of sustainable Forest Livelihoods

A major consideration under this Policy is to provide the necessary framework to support the sustainable management of the island's forest resources. In this regard, it is recognized that there are numerous forest industries which can be carried out in a sustainable manner which include the use of timber and non-timber forests products (NTFP's) for art, craft and furniture making; agroforestry; and ecotourism. The provision of regulatory oversight of this sector will increase the likelihood of the utilization of environmentally friendly practices in harvesting or accessing these natural resources.

Examples of sustainable forest livelihoods include:

I. Furniture, Art and Craft Industries

The art and craft and furniture industries currently utilise local timber including some of Jamaica's famous woods, (Lignum Vitae and Mahogany) as well as NTFPs to produce items for sale. Developing programmes to grow specific species for harvesting will play a role in ensuring the viability of these industries and the creation of a code governing the sustainable harvesting and efficient use of these resources, will contribute to the reduction in the island's rate of deforestation.

II. Ecotourism

There is increasing interest being expressed in the establishment of eco-tourism activities on state-owned and privately held land. The Tourism Master Plan and new guidelines on ecotourism provide an approach to incorporate forests into the tourism product. Ecotourism activities can motivate local communities to maintain and protect forests and wildlife and while the Government of Jamaica seeks to diversify the tourism product, it requires that appropriate technical expertise and advice be sought from the Agency to prevent the use of this resource in an unsustainable manner. The Agency

shall regulate tourism activities which utilize forested Crown lands and roads in and through forested areas. Activities will be permitted taking into account the carrying capacity for each area.

III. Non-Timber Forest Products

It is recognised that the regulation of the Non-timber Forest Products industry is also vital to the sustainable management of supplies of the more commercially demanded types. The current regulatory mechanism allows the Conservator of Forests to grant licences and permits for the removal or sale of forest products from forests managed by the Forestry Department. The marketing of forest products can increase the value of the forests and provide economic incentives for their conservation and sustainable management. Sustainable forest products may include secondary wood products; roots; medicinal plants; and wicker.

L. Development of Standards for Forest Products

There are international and national forest best practices and certification schemes that have been created as market-based instruments to encourage sustainable forest management by forest producers. In order to maintain consistency the utilisation of forest certification or eco-labelling schemes must adhere to international standards and accepted best forest management practice respectively. Under this Policy, forest certification or eco-labeling schemes will be promoted.

M. Provision and Maintenance of Seedlings

In order to increase the number of hectares of land that are reforested each year, there is a need to increase the number and species of seedlings available for distribution to interested persons. The institution of internationally accepted standards and guidelines governing the collection, handling and distribution of seeds will increase the quality of the seedling stock produced and by extension the survival rate of these once planted. The Agency will continue to support initiatives geared towards the reforestation of the island's denuded areas as well as urban spaces, via the provision of timber, ornamental and where available fruit-tree seedlings at a cost to be determined by it.

Transparency, Public Participation, Education, and Awareness

A. Transparency and Public Participation

The Government of Jamaica supports the utilization of participatory approaches in the formulation of policy governing the sustainable management of the island's forested areas. It recognizes that the foundation of any such intervention is the facilitation of a platform that incorporates principles of equity, transparency and which encourages widespread public participation in the planning and implementation phases.

B. Public Education and Awareness

The conservation of the existing forest cover in Jamaica is dependent on all the direct and indirect stakeholders becoming involved in the preservation of the island's forest resources. These stakeholders include the public and private sector interests that own or manage forested areas, who will be encouraged to commit to the preservation of these areas or at the very least the sustainable management of the natural resources. This recognition of the importance of the services provided by forests to the social and economic fabric of Jamaica is dependent on the implementation of an



Forest Trek 2011 (Stuart Reeves).

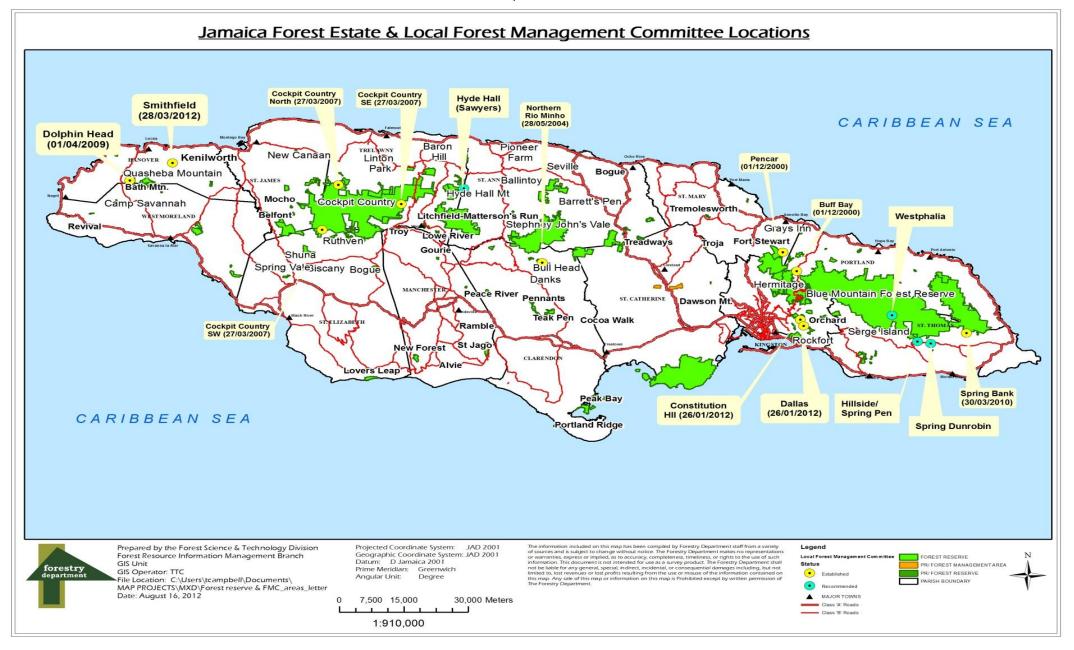
informative yet stimulating public education programme. Any public education programme must encourage all Jamaicans to take part in the decision-making process about forested areas.

C. Community Forests and Local Forest Management Committees

Jamaica's SFMP explicitly recognizes the importance of stakeholder participation in the sustainable management and conservation of Jamaica's forests. Participatory management approaches will be adopted to facilitate access to and sharing of some of the benefits that can be derived from forests by these rural communities, in order for example to reduce rural poverty levels. One such initiative is the opportunity for persons who reside on the fringes of State-owned forests, with an interest in the sustainable management of these areas, becoming part of a local forest management committee.

D. Special Interest Groups

The successful management of the island's forests requires that special interest groups outside of the public, private and non-government sectors are actively involved in the various stages of the planning and implementation process. In that vein rural communities, especially women, will be encouraged to play a greater role in the sustainable management of the forestry sector.



Collaboration and Coordination

While the Agency has included a broad perspective of land use and natural resource management in the Forest Policy for Jamaica, it nonetheless necessitates clear coordination with and among other sectors, stakeholders, Ministries and Agencies. To ensure improved coordination, the following actions shall be pursued by the Agency:

- Work to rationalize policies, laws, regulations, and administrative arrangements for the management of national forests.
- Collaborate with relevant government ministries and agencies and other stakeholders to develop mechanisms for sharing of information, resources, and research on Forest Reserves and Forest Management Areas.
- Incorporate forest-related considerations into sectoral policies and institutionalize joint project planning for lands which need to be protected for preservation of water sources.
- Develop co-management agreements and Memoranda of Understanding governing the roles and responsibilities relating to the management of mangrove forests, biodiversity, local trade in endangered species, and public participation.

Improve Management of Protected Areas

Executing Agencies: Ministry responsible for the Environment

The Protected Areas Committee

Support Agencies: The Forestry Department, The Institute of Jamaica (IOJ), National Environment

and Planning Agency (NEPA), Fisheries Division & JNHT

Jamaica is in the process of developing a system of protected areas. This system will identify areas of land which for biological, ecological, historical, and cultural reasons need to be protected from natural and human threats. The government's biodiversity conservation strategy will continue to include a system of Protected Areas, including Forest Reserves and Forest Management areas. The Protected Areas System Master Plan is to govern the management and development of Protected Areas in Jamaica. It is the responsibility of the Ministry with portfolio responsibility for the Environment to provide support to the agencies that have responsibility for the management of different types of protected areas declared under existing legislation, including the Forestry Department, NEPA, the Institute of Jamaica and the Fisheries Division. The Forest Act will be amended to incorporate relevant provisions to facilitate the effective implementation of the Protected Areas System Master Plan.

The Forestry Department working where required with relevant government agencies, private sector, non-governmental organisations and local forest management committees shall:

- Manage forest reserves and forest management areas guaranteeing active management through partnerships and co-management as required under the Protected Areas Master Plan.
- Manage cross-jurisdictional issues through the development of co-management arrangements.
- Strengthen the protected areas system by maintaining the integrity of declared Forest Reserves and Forest Management Areas and designating new reserves and management areas in biodiversity hot spots.

Climate Change, REDD+, and Carbon Credit Trading

Executing Agency: The Ministry responsible for the Environment, the Forestry Department **Support Agencies:** The Ministry responsible for Energy, National Environment and Planning

Agency (NEPA), Entity with responsibility for UNFCCC Focal Point.

The GoJ recognizes that climate change could have major impacts on the distribution and abundance of forest-dwelling species, the proliferation of pests and diseases, the frequency of storms and other extreme climatic events. The uncertainty associated with climate change requires a preventative approach to maintain resilience and to give forest systems the best possible chance of adapting to changing conditions. It is recognized that the Forestry Department with its technical expertise will have a central role to play in climate change mitigation and adaptation planning. The Agency along with key government agencies and non-governmental stakeholders will give particular attention to activities to address climate change adaptation, and protection of specific forest species, ecosystems and habitats in Jamaica. The Agency shall with other relevant government ministries and agencies:

- Assess forest carbon stocks in both, biomass and biofuels, as well as soil sequestration capacity
- Create enabling environments to encourage private sector investment, as well as investment by and involvement of local communities and special interest groups in sustainable forest management,
- Plan and pilot adaptation initiatives on forest management taking into account the experiences and lessons learnt in the LFMCs.
- Develop closer relationships through LFMCs with forest-dependent communities so as to make them the centre of climate change adaptation efforts while strengthening their adaptive capacity and resilience.

Often other forms of land use outside of the forest sector are likely to offer a quick financial return over the near or medium term for potential investors. This creates perverse incentives to increase deforestation and forest degradation. Existing and emerging markets for carbon offsets can help create incentives¹ for land owners to engage in land management practices that increase forest carbon sequestration and storage capacity.

¹The incentive will take the form of a carbon offset, which is a unit of CO₂ that is reduced, avoided, or sequestered to compensate for emissions occurring elsewhere.

The GoJ will assess options to facilitate individuals in obtaining incentives for forest preservation and/or reforestation for the purpose of trading carbon credits with entities who seek to purchase carbon offsets. Carbon offsets are used to compensate for greenhouse gas emissions production in lieu of reducing emissions. These offsets, or "credits", measured in metric tons of carbon dioxide (CO₂) will be promoted by the Forestry Department as a means of preserving forests while generating income.

The Ministry responsible for the Environment will seek to facilitate different types of forest carbon offset projects in cooperation with the Ministry responsible for Energy, which can generate offset credits (project size can fluctuate greatly depending on the project type). These projects may range from:

- Reforestation projects that restore tree cover on land that was once forested but has been without forest cover for a period of time (e.g. 10 years).
- Afforestation projects that establish tree cover on land that was either never previously forested or cleared of forest cover for more than a specified period of time (e.g. more than 30 or 40 years).
- Forest conservation/avoided conversion avoiding the conversion of forested land to other uses (e.g. agriculture, residential).
- Improved forest management forest management activities that enhance or maintain carbon stocks on currently forested land (e.g. Reduced impact logging).

As such, the Forestry Department will with relevant agencies and stakeholders:

- Promote opportunities offered by international climate change agreements to reduce carbon footprints and acquire saleable credits and financial opportunities for carbon markets.
- Monitor opportunities for the demand of forest carbon offsets and assess the potential to supply forest carbon offsets.
- Assist in registration and enrollment in credible offset registries.
- Investigate programmes with forest carbon offset standards that are legally applicable to Jamaica.

Fuel Wood, Yam Stick Production and Charcoal

Executing Agencies: Ministry responsible for Agriculture, Ministry responsible for Energy

Support Agencies: Ministry responsible for the Environment, The Forestry Department, the Rural

Agricultural Development Agency (RADA), Petroleum Corporation of Jamaica (PCJ), Statistical Institute of Jamaica, National Environment and Planning

Agency (NEPA), Local Universities

Many Jamaicans obtain household income through yam farming, shifting cultivation, and the generation of charcoal from the creation of charcoal kilns which often extend into forested areas. These activities, if not managed properly, can destroy forested areas. Current data is needed to determine the rates of production and consumption of these forest resources. The Agency shall in collaboration with universities and relevant agencies:

- Conduct a sustainable forest livelihoods study to better understand and manage community access to and use of forest resources for fuel wood, yam stick production and charcoal. These will primarily include the main forest livelihood derivatives.
- Work with the Statistical Institute of Jamaica, NEPA and support agencies to have research tools and methods developed to address consumer behavior and use of timber as fuel wood and for charcoal consumption.
- Revisit options and promote and provide technical support for the selection of species for use as locally sourced fuel wood.
- Provide technical support and encouragement for local businesses, which grow live yam sticks for sale, and promote the sustainable use of forests for fuel wood through agroforestry activities; communal tree planting and development of individual woodlots.



Root Crop (Greg Walters, 2008).

Scaffolding and Building

Executing Agencies: Ministry responsible for the Environment, Town and Country Planning

Authority (TCPA), Parish Councils

Support Agency: The Forestry Department, National Environment and Planning Agency

(NEPA), Parish Councils, the Bureau of Standards, Engineering and

Architecture Boards

Another risk and threat to forests is the use of trees and limbs in the construction sector for scaffolding. The Agency supports the sustainable use of trees for this purpose. The Agency shall:

- Liaise with support agencies to develop appropriate guidelines to reduce the use of native trees for scaffolding.
- Develop with the Bureau of Standards and professional boards appropriate rules for use of local scaffolding in the construction sector.

Mining and Quarrying

Executing Agencies: Ministry responsible for Mining and Quarrying,

Ministry responsible for the Environment

Support Agencies: The Forestry Department, Mines and Geology Division, Jamaica Bauxite

Institute (JBI)

Highly productive forestland can be created on reclaimed mined lands or otherwise degraded lands. The Mining Act 1947 requires restoration to as near as possible as existed before commencement of mining or utilization for other uses approved by the Commissioner. Collaboration and coordination is needed to ensure (i) post mining restoration of lands into forest cover as a productive use and (ii) the declaration of mining "no go" areas. The declaration of mining "no go" areas under the Mining Act 1947 is given to the Minister with responsibility for Mining. The Agency shall work with the appropriate Minister to declare specially identified Forest Reserves and Forest Management areas as "no go areas" for the practice of mining.

Currently under the Mining Act 1947 a deposit is required to be paid by the licensee to the Commissioner of Mines. This payment often does not take into consideration either the loss of ecosystems caused by mining or requirements for restoration. Appropriate financial assurances (bonds) will be required from companies which plan to carry out mining and quarrying activities prior to licensing, to cover the projected costs of restoration of lands into forests.

Rehabilitation of the land on which a quarry is located is required subject to a quarry license under the Quarries Control Act 1984. A restoration bond is payable to the Commissioner under the Act. The restoration bond is required to meet the planned end use. Often this end use does not require putting land back into forest. Restoration bonds are needed to enable the Agency to monitor and enforce requirements for reforestation activities after mining and quarrying activities take place to maintain the 30% forest cover across the island.

The Agency in consultation with the Ministry responsible for Mining and Quarrying and other appropriate agencies shall:

- Determine standards and formulae for the making of deposits, compensation and bond payments, for the established loss of natural resources extracted, and for approved forest clearing for the purpose of mining.
- Include the Forestry Department as a member of the Quarry Advisory Committee to ensure appropriate standards are adopted for reforestation of lands proposed for quarrying or which currently are subject to quarry licenses.
- Strengthen the capacity of the National Restoration Committee to address requirements for restoration into forest cover and provision of reforestation bonds to ensure minimization of loss of forest cover.

 Collaborate with the Commissioner of Mines and the National Environment and Planning Agency prior to the grant of permits for mining and quarrying to allow for appropriate conditions to be issued covering reforestation of lands after the conduct of mining.
 Such bonds shall be payable to the Agency if the holders of mining permits or quarry licenses fail to put the land back in forest cover and provide for appropriate maintenance and establishment of trees.

Land Use Planning, Development Orders and the National Spatial Plan

Executing Agencies: Ministry responsible for the Environment; Ministry responsible for Land,

National Environment and Planning Agency, Parish Councils, Ministry

responsible for Local Government

Support Agencies: The Forestry Department, Planning Institute of Jamaica, Ministry responsible

for Agriculture, Ministry responsible for Mining, Urban Development

Corporation (UDC)

A number of government agencies in Jamaica have a central role in development control and land use planning on Crown and private lands. Jamaica has adopted a National Land Policy (1996) and a Rural Agricultural Land Policy (2011). A National Spatial Plan is being prepared. These policies seek to improve coordination of decision-making on land use in Jamaica.

Permitting processes can create land use conflicts between agencies if there is insufficient coordination. As such forested Crown lands will not be divested or leased without careful consideration of environmental impacts; and appropriate safeguards to protect natural resources; as well as an assessment of social and economic costs resulting from the proposed use. A framework is needed for coordination of roles and responsibilities of other government agencies which own or otherwise influence the management of forested Crown lands.

The Forestry Department will in conjunction with appropriate authorities:

- Supply existing forestry data and information to advance appropriate government online systems that share land use and permitting data in digital form with relevant maps that include information on natural resources, proposed transactions, permits, and applications to use forested lands.
- Make appropriate provisions to extend consultation processes to include the Forestry
 Department on development approvals and permits where such developments include the
 removal of a prescribed amount of trees, or identified species.
- Require development projects (government or private sector), which include proposals for diversion of large areas of forested land as prescribed by the Forest Act, to provide an appropriate budget to put in place mandatory compensatory reforestation areas as part of a bond
- Prepare, in consultation with Parish Councils and the Town and Country Planning Authority,
 Planning Guidelines for private landowners who own forested lands on environmental protection, sustainable resource use, and soil conservation
- Provide recommendations to the NEPA in the preparation of Development Orders for specific areas which have forest cover to ensure that due consideration is given to the protection, conservation and sustainable of forests and forest resources

Protection of Water Sources and Watershed Management

Executing Agencies: The National Environment and Planning Agency (NEPA),

Water Resources Authority (WRA)

Support Agencies: The Forestry Department, National Water Commission (NWC),

Ministry responsible for Housing, Ministry responsible for Land

The Agency has the responsibility to protect and preserve Forest Reserves and Forest Management Areas in the upper watersheds around water sources. Severe degradation of watersheds in some parishes (e.g. St. Thomas and St. Andrew) has led to reduced quantity and quality of water in a number of rivers.

The Agency shall in close collaboration with relevant support agencies:

- Continue to manage Forest Reserves and Forest Management Areas in upper watersheds in and around water sources across the island.
- Work with the Water Resources Authority to focus on using the best available tools to identify, map, and assess the condition of land around water sources and the banks of major rivers for reforestation potential.
- Work with the National Water Commission and other relevant agencies to prioritise rehabilitation of forests, which are degraded but important for the protection of water sources, and assess the various interventions that can be utilized to protect these areas.
- Liaise with the National Water Commission, National Environment and Planning Agency and the Water Resources Authority and other relevant agencies to share financial, management, and implementation costs for replanting of degraded watersheds which are near to and surrounding water sources.

Agro-forestry

Executing Agency: Ministry responsible for Agriculture

Support Agencies: The Forestry Department, Rural Agricultural Development Authority (RADA)

Agro-forestry utilises land-use systems and technologies with trees and shrubs on farms to support agricultural production, and protect soil and water resources, enhance biodiversity, sequester carbon and improve landscape values. In Jamaica, there is a need for a shift from the belief that one must remove all trees, in order to make way for farming activities.

The Agency shall with the Ministry of Agriculture and the Rural Agricultural Development Authority

- Continue to develop and promote the use of agro-forestry techniques, thereby building the knowledge base and interest of farmers and the private sector. These techniques will be made available through agricultural extension programmes that already exist.
- Encourage farmers to grow timber trees as well as agricultural produce and sensitize them to the interactions between forests and farming and how to design systems to integrate and promote natural resource management.
- Provide technical support for small farmers who lease Crown lands for projects in agroforestry as well as non-timber products.

Tourism

Executing Agency: Ministry with responsibility for Tourism

Support Agencies: Tourism Product Development Company (TPDCo); Forestry Department

The Goals of the Tourism Sector Plan of Vision 2030 and supporting documents currently being prepared by the Ministry of Tourism including a Community Tourism Policy, and Cockpit Country Ecotourism Usage Guidelines all recognise the importance of ecotourism and the value of forests. Jamaica is still viewed primarily however as a sand and sea destination and there are not comparable resources to promote Jamaica's forested areas and protected areas for visitors. Opportunities for eco-tourism and community tourism have however increased steadily in Jamaica.

The Agency shall work alongside the Ministry of Tourism and the Tourism Product Development Company to:



A view of Hollywell Recreational Park in the Blue Mountain Reserve (Forestry Department).

- Design marketing and other materials for (Forestry Department).
 use of Forest Reserves and Forest Management areas and Urban Forests for Jamaicans and Tourists
- Develop appropriate management and eco-tourism plans, sites and experiences to market specific sites as Jamaica's premier eco-tourism and protected area destinations
- Facilitate the establishment of standards for craft items using timber and non-timber forest products.

Urban Forests

Executing Agencies: Local Parish Councils, Forestry Department

Support Agencies: The National Environment and Planning Agency (NEPA), Urban Development

Corporation (UDC), Tourism Product and Development Company (TPDCo),

Ministry responsible for Tourism; NSWMA

A growing population in cities in Jamaica coupled with the rapid growth and urbanization of once small rural towns highlights the need for the protection, development, and management of urban areas with forests. Retaining forests in urban areas will need to be an integral component of city development. The Forestry Department currently has limited jurisdiction in urban areas. Regulatory control over the removal of individual and groups of trees is currently held by Parish Councils specifically for preservation of amenity. Urban forests are needed in Jamaica's growing cities and tourist centers. This policy proposes the transfer from the Town and Country Planning Act 1957 the

power of the local authority to issue Tree Preservation Orders to the Forestry Department. The Forest Act will be amended to facilitate this designation. The power to issue and enforce Tree Preservation Orders will be expanded to permit protection of both species, groups of trees and forests for various interests including amenity, historical and cultural.

The Agency will work with appropriate agencies to:

- Provide information on the most suitable tree species for use in urban areas and the proper methods of caring and maintaining these trees.
- Utilise powers under the amended Forest Act to preserve and regulate urban forests and trees.
- Develop plans for reforestation of identified degraded urban forests and standards and guidelines for urban tree planting and issuance of tree preservation orders.
- Encourage involvement of the public in identifying, establishing, mapping and managing urban forests for leisure and recreational purposes.
- Conduct an urban tree inventory with existing GIS technology.

Protection and Sustainable use of Trees of National Significance

Executing Agencies: The Forestry Department

Support Agencies: Jamaica National Heritage Trust (JNHT), Rural Agricultural Development

Agency (RADA), Parish Councils, National Solid Waste Management Authority

(NSWMA), Institute of Jamaica (IOJ)

The Agency will identify tree species of national significance and promote their protection and sustainable use. For example, the national tree is the Blue Mahoe (Hibiscus elatus) and the tree which produces the National Flower is the Lignum Vitae (Guiacum officinale). Both the Blue Mahoe and the Lignum Vitae trees have been widely used for furniture making and decorative objects such as picture frames, bowls, and carvings for sale. Sustainable use of tree species of national significance can be achieved with the implementation of appropriate management and conservation programs.

The Agency shall:

- Produce a list of trees of national significance and determine appropriate requirements for protection and sustainable use.
- Identify specific trees which need to be designated as protected to ensure their appropriate conservation including through the use of Tree Preservation Orders.
- Provide seedlings of species identified as nationally significant at a reasonable cost.
- Liaise with appropriate government agencies, the private sector, and civil society to promote the use of trees of national significance in landscaping and beautification projects, and in mixed commercial and large residential zones by.

Replanting Mangrove Forests

Executing Agencies: The National Environment and Planning Agency (NEPA)

Support Agencies: The Forestry Department; Academic institutions; Fisheries Division

Jamaica is a party to the Ramsar Convention on Wetlands of International Importance, which concerns the conservation and sustainable use of mangrove forests². Its purpose is to curb the progressive encroachment on, and loss of mangrove forests. Jamaica has dedicated four Ramsar sites: Black River Morass (1997), Palisadoes – Port Royal (2005) and Portland Bight Mangrove forests and Cays (2006) and Mason River (2011). Through its commitment to Ramsar, Jamaica is expected to preserve the current level of mangrove forest cover. The depletion of mangroves is a cause of serious environmental and economic concern. Mangroves play a pivotal role in coastal protection as fish nurseries and to protect near shore lands. In an effort to arrest degradation and ensure proper management, the Forestry Department will take a more active role in the replanting of mangrove forests. The Agency retains jurisdiction over mangrove forests that exist in Forest Reserves, Forest Management Areas and Forest Estates. Mangrove forests are also often found on private land and have in the past been removed by private landowners with very little expertise in replanting and monitoring growth.

The Agency shall in collaboration with the National Environment and Planning Agency and Universities:

• Map and identify mangrove forests within its jurisdiction which are in need of rehabilitation and work to design appropriate re-planting and monitoring interventions.

Research, Advanced Education, and Training for the Forestry Sector

Executing Agencies: The Forestry Department

Support Agencies: Scientific Research Council (SRC), Institute of Jamaica (IOJ), National

Environment and Planning Agency (NEPA), Rural Agricultural Development

Agency (RADA); academic institutions

The Agency intends to develop a process to increase collaboration with tertiary institutions, universities, research agencies, and non-governmental organisations to improve research and knowledge on tropical forests with a focus on areas relevant to forest managers and field personnel.

The Agency shall establish a Research Committee jointly with the Scientific Research Council, academia and non-governmental organisations, and its duties shall include:

- Develop a plan and priorities for national forestry research;
- Develop memorandum of understanding with tertiary institutions to increase collaborative research;

² The Ramsar Convention defines mangrove forests as "areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six meters".

- Identify possible partnerships with the local private sector and assess the potential for use of non-timber forest products;
- Develop capabilities to conduct ecosystem service valuation of forest lands;
- Review research applications for Forest Reserves and Forest Management Areas;
- Review research on the growth and regeneration of a number of forest species in a range of ecosystems; and,
- Promote the conduct of sociological research relating to forest communities and subsistence and livelihood
- Review opportunities to promote the development of young person in plant taxonomy, and core technical forestry competencies.

Illegal Harvesting of Wood and Non-Timber Forest Products

Executing Agencies: The Forestry Department

Support Agencies: The National Environment and Planning Agency (NEPA), Rural Agricultural

Development Agency (RADA), Constabulary Forces of Jamaica;

Judicial system; Ministry with responsibility for Justice

Forest crimes occur in Jamaica across a spectrum of activities involving forest harvesting, transportation, processing, and sale. The SFMP outlines goals to improve compliance with forest legislation and a strategy for increasing the capacity of the Agency to ensure increased patrolling and enforcement. The Agency is required to complement this activity with monitoring of areas with satellite imagery to target areas which have been affected by illegal activities. In addition there needs to be increased public awareness of the legal framework under the Forest Act and changes in consumer behaviour and attitudes to illegal timber harvesting

Illegal logging and collection of non-timber forest products is however unlikely to be reduced unless:

- Local communities have access to use and obtain benefits from forested areas on a sustainable basis;
- A strong system is developed for monitoring, timber trade and transportation domestically;
- Higher penalties may be awarded for illegal logging activities;
- Damages for restoration may be ordered by the Court for loss of ecological resources and economic valuation and transferred to the Agency.

The Forest Act will be amended to improve the Agency's enforcement capabilities to combat illegal harvesting of timber and non-timber forest products in the areas managed by it. In addition, the Agency will develop in consultation with relevant government agencies and the Jamaica Constabulary Force, an enforcement strategy which will outline mechanisms governing the:

- Report of forest crimes and collate and analyze the statistics
- Implementation of cost-effective enforcement of the Forest Act and subsidiary legislation
- Establishment of a supply chain from the point of harvesting to the transportation of the forest product to its final destination
- Definition of the responsibilities in law enforcement for agencies (e.g. enforcement officers, members of the constabulary, and game wardens).

- Provision of public awareness programmes for persons living near forests and commercial users of charcoal and other wood products
- Provision of increased training programmes for forest enforcement officers
- The collection of accurate and up-to-date data on forest crime detection monitoring, reporting, investigation, road checks and licensing systems
- Protection of Jamaican indigenous tree species, and
- Squatting on Crown lands

International Agreements

Executing Agency Focal Points:

Biodiversity Ministry responsible for the environment **Climate Change** Ministry responsible for climate change

Ramsar The National Environment and Planning Agency

CITES The National Environment and Planning Agency

Forestry instruments The Forestry Department

Support Agency Ministry responsible for Foreign Affairs

The Jamaican Government is a Party to over 30 international and regional environmental agreements including the United Nations Framework Convention on Climate Change (UNFCCC), Convention on Biological Diversity (CBD), Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and the Ramsar Convention (Convention on Wetlands of International Importance). The Government is also committed to implementation of the Non-legally binding instrument on all types of Forests. Jamaica faces many environmental challenges as a small island developing state including issues associated with loss of endangered species, wetlands, climate change, sea level rise, and pollution from land based sources. The Government has expressed its willingness to address these national and global issues by co-operation among States through multilateral and regional agreements .Steps have been taken to adopt administrative, policy, and legal mechanisms to implement these agreements. The Agency will work to ensure effective implementation of international obligations in relation to local practice.

The Agency shall with other relevant government ministries and agencies:

- Develop, implement, publish national forest programmes which identify actions needed and contain measures, policies or specific goals, taking into account the relevant Intergovernmental Panel on Forests and Intergovernmental Forum on Forests proposals for action and resolutions of the United Nations Forum on Forests
- Support the protection and use of traditional forest-related knowledge and practices in sustainable forest management with the approval and the involvement of the holders of such knowledge and promote fair and equitable sharing of benefits out of their utilization, according to national legislation and relevant international agreements;
- Create enabling environments to encourage private sector investment, as well as investment by and involvement of local communities and special interest groups in sustainable forest management for timber and mangrove forests.

Glossary of Terms

AFFORESTATION: The establishment of a forest or stand of trees in an area where there was no forest.

AGROFORESTRY: an integrated approach of using the interactive benefits from combining trees and shrubs with crops and/or livestock. It combines agricultural and forestry technologies to create more diverse, productive, profitable, healthy, and sustainable land-use systems.

BIODIVERSITY: The variability among living organisms; this includes diversity within species (genetic diversity), between species and of ecosystems.

BIOPROSPECTING: Scientific research that looks for a useful application, process, or product (useful organic compounds) in nature (microorganisms, plants, and fungi).

CARBON SEQUESTRATION: Process of capturing and securely storing carbon dioxide emitted from the global energy system. In terrestrial storage, the carbon (a large amount) is stored in soils and vegetation, which are our natural carbon, sinks. Increasing carbon fixation through photosynthesis, slowing down or reducing decomposition of organic matter, and changing land use practices can enhance carbon uptake in these natural sinks.

CLIMATE CHANGE: Climate change is a significant and lasting change in the statistical distribution of weather patterns over periods ranging from decades to millions of years. The term sometimes is used to refer specifically to climate change caused by human activity, as opposed to changes in climate that may have resulted as part of Earth's natural processes.

CLIMATE CHANGE ADAPTATION: Practical steps to protect countries and communities from the likely disruption and damage that will result from effects of climate change. For example, flood walls should be built and in numerous cases it is probably advisable to move human settlements out of flood plains and other low-lying areas.

CLIMATE CHANGE MITIGATION: Interventions to reduce the sources or enhance the sinks of greenhouse gases.

CO-MANAGEMENT: Is a process of management by which government shares power with stakeholders, with each given specific rights and responsibilities.

CONSERVATION: Is an integrative approach to the protection and management of biodiversity that uses appropriate principles from biological, social science and economic fields.



Shanti Persaud Greenwich.

COVER (FOREST): the percent of a fixed area covered by the crown of an individual plant or delimited by the vertical projection of its outermost perimeter.

CROWN LANDS: Land owned by the Government of Jamaica and held by the Commissioner of Lands.

DEFORESTATION: the long-term or permanent loss of forest cover.

ECOSYSTEM: a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.

ECOSYSTEM SERVICES: Include provisioning services such as food, water and energy; regulating services such as flood, air purification and disease control; cultural services such as spiritual, recreational; education, scientific and cultural benefits, and supporting services such as nutrient cycling and soil generation.

ENDEMIC: The ecological state of being unique to a defined geographic location.

ENDANGERED: Endangered Species means that the species has a very small population and is at a great, or greater, risk of becoming extinct.

ENVIRONMENT: all land, area beneath the land surface, atmosphere, climate, surface water, ground water, seas, marine and coastal areas, seabed, wetlands and "natural resources".

EX-SITU CONSERVATION: the conservation of biological diversity outside of its natural habitats.

FORESTRY: the science, art, and practice of understanding, managing, and using wisely the natural resources associated with, and derived from forests

FOREST: An ecosystem characterized by a more or less dense and extensive tree cover, often consisting of stands varying in characteristics such as species, composition, structure, age class, and associated processes, and may include meadows, streams, fish and wildlife.

FOREST DEGRADATION: changes within the forest which negatively affect the structure or function of the stand or site.

FOREST ESTATE: Any land managed by the Forestry Department.

FOREST MANAGEMENT: all measures and actions which determine the extent to, and conditions under which forest resources are conserved, accessed, used, transformed and marketed.

FOREST PLANTATION: a forest stand established by planting or/and seeding in the process of afforestation or reforestation.



Nathalie Babineau-Griffiths, 2010.

GERMPLASM: A germplasm is a collection of genetic resources for an organism. For forests, the germplasm may be stored as a seed collection or, as trees, in a nursery.

HABITAT: the place where an organism or population naturally occurs.

INVASIVE SPECIES: a deliberately or accidentally introduced species to an area different from its native range.

LIVELIHOODS: Comprises the capabilities, assets and activities required for a means of living.

NATIVE SPECIES: plants, animals, fungi, and micro-organisms that occur naturally in a given area or region.

NATURAL RESOURCES: Are the living plants, animals, organisms and other biological factors within the environment and the geological formations, mineral deposits, renewable and non-renewable assets, and the habitat of the living plants, animals, organisms and other biological factors.

NON-TIMBER FOREST PRODUCTS: Commodities obtained from the forest that *does not* necessitate harvesting trees. It includes game animals, nuts and seeds, berries, mushrooms, oils, foliage, medicinal plants, peat, fuel wood, forage, etc.

PARTICIPATION: a process through which stakeholders' influence and share control over the decisions and resources which affect them.

PRIVATE LAND: Land other than land owned by the Crown.

PROTECTED AREA: a geographically defined area that is designated and managed to achieve specific conservation objectives.

REDD+: refers to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries

REFORESTATION: the re-establishment of forest formations after loss of cover due to human-induced or natural perturbations.

SILVICULTURE: The practice of controlling the establishment, growth, composition, health, and quality of forests to meet diverse needs and values.

SUSTAINABLE USE: the use of biological diversity in a way and at a rate that does not lead to its long-term decline.

SUSTAINABLE DEVELOPMENT: development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

TIMBER: I trees when they have fallen or been felled, and all wood whether cut up or fashioned for any purpose or not.

TREE: a woody perennial with a single main stem, or in the case of coppice with several stems (includes bamboos, plants, stumps, brushwood and canes), having a more or less definite crown.

WATERSHED: the specific land area that drains water into a river system or other body of water.

WILDLIFE: wild fauna and flora as well as micro-organisms.



The Forestry Department operates four nurseries island-wide where seedlings are produced for public sale and for use in Agency activities (Forestry Department).

For more information about the Forest Policy for Jamaica please visit the Forestry Department's website:

www.forestry.gov.jm