



*Government of the Republic of Trinidad and Tobago*

# **NATIONAL PROTECTED AREAS POLICY**

*February 2011*

# TABLE OF CONTENTS

TABLE OF CONTENTS .....	i
ACRONYMS AND ABBREVIATIONS .....	iii
1.0 Introduction .....	1
1.1 Background and justification .....	1
1.1.1 <i>The importance of protected areas in Trinidad and Tobago</i> .....	1
1.1.2 <i>Threats to natural heritage</i> .....	2
1.1.3 <i>Challenges to development of a comprehensive protected area system</i> .....	3
1.1.4 <i>Attempts at rationalising a system of protected areas</i> .....	4
1.2 Existing protected areas in Trinidad & Tobago .....	6
1.2.1 <i>Legally designated protected areas</i> .....	6
1.2.2 <i>Other categories of protected areas</i> .....	7
1.3 Protected area management arrangements .....	8
1.3.1 <i>Government agencies with legal mandates for designating and managing PAs</i> .....	8
1.3.2 <i>Government agencies without legal mandates for designating and managing PAs</i> .....	11
1.3.3 <i>Multi-sectoral committees</i> .....	11
1.3.4 <i>Civil society involvement</i> .....	12
2.0 Policy context .....	14
3.0 Scope .....	17
4.0 Vision .....	18
5.0 Goal .....	18
6.0 Principles and values .....	18
7.0 Objectives .....	20
8.0 Policies to achieve strategic objectives .....	20
8.1 Conservation of natural heritage and ecosystem diversity .....	20
8.2 Conservation of cultural, spiritual/religious and historical heritage .....	21
8.3 Sustainable livelihoods and human well-being .....	21
9.0 Policies to guide implementation .....	23
9.1 Management arrangements: .....	23
9.2 Protected Areas Classification System .....	26
9.3 Establishment of protected areas .....	32
9.4 Land use and physical development planning .....	32
9.5 Conflicts in land use and physical development planning .....	33
9.6 Participatory management .....	33
9.7 Conflict management .....	33
9.8 Legislation .....	34
9.9 Harmonising policies .....	35
9.10 Management plans .....	36
9.11 Financial mechanisms .....	36
9.12 Capacity building: .....	37
9.13 Research .....	38
9.14 Knowledge sharing and information management .....	39
9.15 Livelihood development .....	39
9.16 Education and awareness .....	40
9.17 Regional and international programmes .....	40

10. Monitoring, evaluating, reporting and review.....	41
Appendix 1: Existing Protected Areas in Trinidad and Tobago.....	42
Appendix 2: Key national policies, legislation, and plans.....	43
Appendix 3: Key regional and international agreements.....	45
Appendix 4 – Outline of Selection Criteria for the Different Categories of Protected Areas to be established in Trinidad and Tobago.....	46
Appendix 5: Glossary.....	52

## **ACRONYMS AND ABBREVIATIONS**

CBD	Convention on Biological Diversity
CBOs	Community-based organisations
CDA	Chaguaramas Development Authority
CFCA	Caribbean Forest Conservation Association
DNRE	Department of Natural Resources and the Environment
EMA	Environmental Management Authority
ESA	Environmentally Sensitive Area
GIS	Geographic Information Systems
IMA	Institute of Marine Affairs
IUCN	International Union for Conservation of Nature
M&E	Monitoring and evaluation
MEAs	Multilateral Environmental Agreements
NBSAP	National Biodiversity Strategy and Action Plan
NECC	National Environment Conservation Council
NEP	National Environmental Policy
NGOs	Non-governmental organisations
NRWRP	National Reforestation and Watershed Rehabilitation Project
OAS	Organisation of American States
PAs	Protected Areas
PES	Payments for Ecosystem Services
SIDS	Small Islands Developing State
SMC	Stakeholder Management Committee
SPAW	Specially Protected Areas and Wildlife
TCPD	Town and Country Planning Department
THA	Tobago House of Assembly
UNCCD	United Nations Convention to Combat Desertification
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UTT	University of Trinidad and Tobago
UWI	University of the West Indies

## 1.0 Introduction

### 1.1 Background and justification

#### 1.1.1 *The importance of protected areas in Trinidad and Tobago*

The earliest recorded formal protection of natural resources in Trinidad and Tobago began on the island of Tobago in 1765 with the establishment of the first Forest Reserve in the Western Hemisphere in the Main Ridge. The area was reserved during the original land survey of Tobago by through George III's 1764 instructions to the Commissioners for the Sale of Lands. Currently there are several categories of legally declared protected areas (PAs) in Trinidad and Tobago, established under various pieces of legislation. These PAs include Forest Reserves, Wildlife Sanctuaries, Prohibited Areas, Protected Marine Areas, Environmentally Sensitive Areas (ESAs) and cultural and heritage "properties of interest".

PAs are important management tools for protecting, conserving and managing natural and built heritage, and so critical to national sustainable development. They vary in intensity of human use from no entry areas in the case of strict nature reserves, to sites that allow for multiple uses in different zones. They can be terrestrial, coastal, or marine or a combination of these. Some of the major reasons for establishing PAs include:

- ***Protection of Biodiversity.*** The primary reason of establishing PAs is the conservation of genetic diversity, species, ecosystems and natural habitats and as a tool for the maintenance and recovery of viable populations of rare or threatened species in their natural environment.
- ***Ecosystem goods and services:*** PAs support the ability of ecosystems to provide a wide range of goods and services. Goods include food (such as game animals, fish and plant products), timber, craft materials, medicinal plants and other forms of biodiversity directly used by people. Ecosystem services include wildlife habitats, the formation, conservation and stabilisation of soil, removal of carbon dioxide from the air, watershed and coastline protection, provision of water, maintenance of natural processes such as pollination that are important to agricultural systems, climate regulation, and maintenance of physical buffers to natural disasters. PAs also support a variety of valuable non-consumptive uses including tourism, recreation, education, non-destructive scientific research and spiritual activities. In addition, PAs also protect biodiversity for its intrinsic value.
- ***Facilitating international cooperation:*** Regional or trans-boundary PAs enable countries to cooperate in the protection of ecosystems (e.g. Meso-American corridor and the regional marine PA known as the Caribbean Seas Initiative).

- **Meeting international obligations:** International obligations under multi-lateral environmental agreements (MEAs<sup>1</sup>) can give rise to the international designation of protected natural areas in Trinidad and Tobago. This places added priority on the protection of such internationally recognized areas, and requires the country to ensure that such PAs receive protection under national legislation.
- **Building resilience to climate change:** Small islands such as Trinidad and Tobago are especially vulnerable to the impacts of global climate change. This vulnerability provides an additional justification for designation and effective management of PAs, because they provide significant ecosystem services that can contribute to climate change adaptation and mitigation. Adaptation measures facilitate coping and recovering from the impacts of climate change. In this regard, PAs can function as buffers against the impacts of catastrophic weather events and in protecting water resources in the face of changing weather patterns, including rainfall reduction. Mitigation measures enable the removal of greenhouse gases from the atmosphere. PAs function as natural greenhouse gas sinks, particularly protected forests and wetlands. PAs can also be used to secure well functioning and robust ecosystems that are resilient to climate change impacts such as temperature changes and changes in rainfall patterns, and thereby continue to provide necessary ecosystem services in spite of climatic change.

### **1.1.2 Threats to natural heritage**

Protecting the country's natural heritage is increasingly important in the face of the driving factors that are destroying and degrading natural ecosystems including:

- increased rates of conversion of natural ecosystems to built development (industrial, commercial and residential);
- unsustainable agricultural practices such as slash and burn, leading to loss of natural ecosystems especially on hillsides and critical watersheds;
- expansion of roads, utility networks, oil and gas pipelines and other infrastructure in a manner that increases fragmentation of natural ecosystems;
- intentional or accidental destruction of forest by fire, resulting in a fire climax which prevents natural regeneration of the native vegetation type;
- invasion by non-native species into native ecosystems (e.g. elephant grass invades burnt forested areas and forms a "fire-climax", bamboo invades forest);

---

<sup>1</sup> MEAs include the Convention on Biological Diversity, the Protocol Concerning Specially Protected Areas and Wildlife (or SPAW Protocol), the Ramsar Convention on Wetlands and the UNESCO World Heritage Convention.

- over-exploitation of biodiversity resources (e.g. over-hunting of wildlife, unsustainable timber harvest, over-fishing and over-extraction of orchids and other ornamental plants);
- the impacts of pollution and climate change on natural ecosystems.

These have resulted in various negative impacts including:

- escalating habitat degradation and fragmentation and loss of natural ecosystems (e.g. forests, savannas, coral reefs), including loss of habitats for plant and animal species;
- declining populations of key animal and plant species, with several becoming threatened or endangered (e.g. ocelot [*Leopardus pardalis*], West Indian manatee [*Trichechus manatus*], black coral [*Antipatharians* spp.]), Blue and Gold Macaw [*Ara ararauna*]), or confined to remote and isolated areas (e.g. Pawi or Trinidad Piping-Guan [*Pipile pipile*]);
- decreasing quality and quantity of water generated for human usage due to the degradation of watersheds; and
- increased possibilities for transmission of diseases such as Yellow Fever due to human encroachment into forested areas.

### **1.1.3 Challenges to development of a comprehensive protected area system**

There have been several challenges to the establishment and management of a comprehensive system of protected areas including:

- **outdated legislation:** although there are legally designated PAs in Trinidad and Tobago, they have been designated under legislation that is outdated and requires revision to reflect current management practices including: the use of the ecosystem approach; recognition of the value of ecosystem services; the need for minimum areas for conservation of viable species populations; participatory management; zoning for multiple use; implementation of international commitments; and addressing the impacts of climate change;
- **outdated policy:** The only existing comprehensive policy on PAs is the “Policy for the Establishment and Management of a National Parks System in Trinidad and Tobago”, which is now twenty-seven (27) years old having been developed in 1982, and needs to be revised to reflect the current national socio-economic context. In addition, many of the sixty-one (61) potential PAS identified in the Policy, are now degraded. Finally, there have been several policy, legislative and institutional changes since 1982, including the development of the National Environmental Policy (2005), passage of the Environmental Management Act (Chap. 35:05) and the establishment of Environmental Management Authority.
- **lack of a current national land use planning framework:** to address the zoning of the country for multiple land use which would ensure balance

between the need for designation of areas to protect biodiversity (including to maintain ecosystem services) and demands for built development.

- **multiple legal designations:** several PAs have been designated under multiple categories. This state of affairs reflects successive attempts to address weaknesses in the enforcement, monitoring and surveillance, administrative, and legislative framework for managing PAs. For example, the Aripo Savannas has been declared a Prohibited Area as well as an ESA and is being managed by the Forestry Division as a “Scientific Reserve”.
- **multiple managers of a protected area, each providing different functions:** Multiple designations have complicated administrative arrangements, with multiple agencies having various roles and responsibilities for the management of a particular PA. Thus, management often involves a variety of government agencies and other stakeholders which complicates the overall management and protection of the site particularly the enforcement, monitoring and surveillance of the enabling legislation for the PA. This challenge is reviewed in detail in section 1.3.

#### **1.1.4 Attempts at rationalising a system of protected areas**

Since the 1970s there have been various attempts to create a system of PAs in Trinidad and Tobago. In 1972, a Multi-Ministerial National Environment Conservation Council (NECC) was established, which recommended the establishment of a Statutory Authority with responsibility for national parks and wildlife conservation. This proposed National Parks Service would reside within the Forestry Division and the manage National Parks at Navet Dam, Valencia Dam and Caroni Wildlife Sanctuary. It was also proposed that the National Parks Service would develop and manage a wider park system including Forest Parks, Local Parks, Wildlife Sanctuaries, Nature Reserves, Historical Sites, View Points and Private Parks.

In 1978, the Organization of American States (OAS) assisted Trinidad and Tobago in developing a plan for a national parks and protected areas system and in the preparation of a policy from which enabling legislation could be enacted. The resulting National Parks Systems Plan included sixty-one PAs in six categories (thirteen scientific reserves, eight national parks, eight natural landmarks, thirteen nature conservation reserves, six scenic landscapes and thirteen recreational parks). A Policy for the Establishment and Management of a National Parks System in Trinidad and Tobago was approved by the Government in 1982 and is commonly referred to as the 1980 Systems Plan. While this Policy currently guides the Forestry Division activities concerning PAs, the enabling legislative and institutional changes recommended by the plan were never implemented.

Draft Forest Resource and National Park Conservation Bill, including Regulations and Model Conservation Area Regulations were prepared and released for comment in 1990. This legislation was never enacted. In 1991, a Tropical Forestry Action Plan (TFAP) reviewed the 1980 National Parks System Plan and the Draft Legislation, and recommended funding of a 5-year Development Project for a National Parks and Protected Areas System under TFAP programme. However, no funding materialized for this development project.

In 1992, the Inter-American Development Bank Land Rationalization and Development Programme served as the genesis of a National Parks and Wildlife Conservation Programme, which included a five-year protected area development project. This project was designed to kick-start the original OAS Systems Plan and drew on the prioritization of areas in the Forestry Resources Policy. The proposed project aimed to strengthen the Forestry Division's National Parks Section through technical assistance and staffing. The project was to be funded under the Inter-American Development Bank-funded Investment Sector Reform Programme and Agriculture Sector Investment Programme.

In 1993, the World Bank took over the development of the protected areas project. The National Parks Project then became the Protect Areas and Wildlife Management Project. In 1995, the Government established a Project Task Force to oversee and coordinate the preparation of the World Bank Project. The Project focused on the creation of three (3) national parks at Matura and Maracas in Trinidad, and Main Ridge in Tobago, and two (2) marine/coastal protected areas at Nariva in Trinidad and Speyside in Tobago, as well as the creation of a National Parks and Wildlife Conservation Authority.

A World Bank funded revised plan for national parks in Trinidad and Tobago, which was based on current scientific thinking and management practice, was approved by the Cabinet in 1996 but subsequently stalled due to contention surrounding the establishment of a new institution to manage these national parks.

In 1997, a Bill was drafted for the Establishment of a National Parks and Wildlife Authority in Trinidad and Tobago. In 1999, the Bill was separated into a National Parks and other Protected Areas Bill and the Conservation of Wild Life Bill. The fact that PAs were coupled with Forests in the 1990 Draft Bill, then with Wildlife in the 1997 Draft Bill, and subsequently emerged on its own in the 1999 Draft Bills illustrates the policy vacuum in which the draft legislation was being prepared. This contention dogged the Protected Areas legislation due to a lack of a policy basis for key provisions, particularly the designation of a body to administer the system of PAs, and the areas of the country to be declared protected areas.

The Environmentally Sensitive Areas (ESA) Rules that were enacted in 2001, has been utilized to address the legislative gap by designation of areas in need of protection and their classification into various management categories. However, these Rules exist in the absence of primary legislation for the establishment of a system of PAs, which is still needed to provide an administrative system for the

management of PAs. Additionally, as subsidiary legislation the Rules cannot supersede the provisions of existing primary legislation governing the existing types of land use, such as the Forests Act (Chap. 66:01), Conservation of Wild Life Act (Chap. 67:01) and State Lands Act (Chap. 57:01). This imposes severe limitations on the efficacy of the ESA rules, particularly with regard to the administration of protected areas.

The numerous attempts by the Government of Trinidad and Tobago to create a system of national parks and other protected areas in Trinidad and Tobago, has been hampered by the absence of enabling legislation to implement a comprehensive systematic approach to wildlife, national parks and other protected areas management.

The overriding reason for the inability to finalize the National Parks Bill has been the lack of national consensus on key elements of the protected areas system, primarily, the administrative structure for managing parks and wildlife. This problem stems from the fact that a National Parks and Wildlife Policy - a necessary prerequisite to drafting of enabling legislation - is outdated.

## **1.2 Existing protected areas in Trinidad & Tobago**

Trinidad and Tobago has several legally designated protected areas, along with categories that have evolved without legal status, which are outlined hereunder:

### **1.2.1 Legally designated protected areas**

The protected areas categories that have legal status include:

- (a) **Forest Reserves** designated under the Crown Lands Act, which is now the State Lands Act (Chap. 57:01). These reserves were established to manage timber resources by imposing fines, restrictions and the use of permits to regulate extraction of high-grade timber species. There are 36 such areas in Trinidad and Tobago;
- (b) **Wildlife or Game Sanctuaries** are designated under the Conservation of Wild Life Act (Chap. 67:01); there are 13 in Trinidad and Tobago. They are intended to protect wild animal species by restricting hunting and collection of animals in and from such sanctuaries;
- (c) One **Protected Marine Area**, the Buccoo Reef, Tobago, was designated under the Marine Areas (Preservation and Enhancement) Act (Chap. 37:02) to preserve and enhance the natural beauty; protect the flora and fauna; promote the enjoyment by the public; and promote scientific study and research;
- (d) The **North-West Peninsula of Trinidad** is vested in the Chaguaramas Development Authority (CDA), which is responsible for the management of the biological resources contained in the forests and marine areas of the lands vested to it. In this regard, the Authority manages the Chaguaramas

- Peninsula (including the offshore islands and the marine area) primarily for recreational use, as a de-factor national park;
- (e) Two categories of **Prohibited Areas** exist under law in Trinidad and Tobago. There are 19 prohibited areas designated under the Forests Act (Chap. 66:01) with restricted entry either for set period of year (e.g. at certain nesting beaches during sea turtle nesting season from 01 March to 31 August), or throughout the year (e.g. Aripo Savannas). Some Prohibited Areas include areas that were also declared as Forest Reserves and Wildlife Sanctuaries. The Fisheries Act (Chap. 67:51) also provides for the declaration of prohibited areas that may be used to protect spawning grounds of commercially important species, however, no such areas have been declared;
  - (f) **Environmentally Sensitive Areas (ESAs)** are designated under the Environmental Management Act's (Chap. 35:05) Environmentally Sensitive Areas Rules, for the conservation and management of biologically significant areas. To date, three have been declared and five further areas are proposed and are at different stages of the approval process. They are intended to serve several objectives relating to biodiversity, species, ecosystem and livelihoods conservation, fulfilling international obligations and the promotion of scientific research. The existing and proposed ESAs include Ramsar-designated wetlands of international importance (Buccoo Reef, Nariva Swamp and Caroni Swamp) the Aripo Savannas and the Main Ridge Forest Reserve;
  - (g) Two (2) areas protected under the Water and Sewerage Authority Act (Chap. 54:40) – the upper Courland River Basin in Tobago (above the intake) and the Quare River valley in Valencia (between the Hollis Dam and the intake). These areas are protected only in so far as potentially polluting activities are prohibited within the designated area.
  - (h) Some 100 sites were inventoried for designation as **heritage sites** under the National Heritage Trust Act (Chap. 40:53), which was developed to protect any monument and any fossil, place or site of natural beauty or national, historic, scientific or archaeological interest. However, no designations have been made to date. Three of the proposed heritage sites are under international consideration for designation as UNESCO World Heritage Sites;

Maps showing the existing legal protected areas in Trinidad and Tobago are provided in Appendix 1.

### **1.2.2 Other categories of protected areas**

In addition to the *de jure* categories identified above, there are several *de facto* PAs that are managed by government, civil society and private citizens. These include:

- (a) **Un-proclaimed Forest Reserves** that are managed by Forestry Division but are legally classified as State Lands, there are five such sites in Trinidad and Tobago;

- (b) A **Natural Landmark**, the San Fernando Hill, is managed by the Forestry Division as proposed under the 1980 Systems Plan. It was never legally designated;
- (c) Fort George and Lopinot are managed as **Historic Sites** as proposed under the 1980 Systems Plan and are not legally designated;
- (d) Cleaver Woods is managed by the Forestry Division as a **Recreation Park**, one of the proposed areas under the 1980 Systems Plan, but both the site and the category have not been legally designated; and
- (e) **National Heritage Parks** were proposed and are being partially implemented by the Local Government including the Devils' Woodyard. However, there is no legal status for such parks.

### 1.3 Protected area management arrangements

The administrative framework for the management of PAs is complex. There are several agencies and multi-sectoral committees with responsibilities for PAs management, which includes areas, managed by or with the involvement of civil society.<sup>2</sup> These complex institutional arrangements make PA management very challenging. Outlined hereunder are the roles and responsibilities of government agencies (including those without legal mandates to manage PAs), national committees and civil society involved in PAs management in Trinidad and Tobago.

#### 1.3.1 Government agencies with legal mandates for designating and managing PAs

- **Forestry Division, Ministry of Housing and the Environment:** directly responsible for managing Wildlife Sanctuaries, Forest Reserves, and Prohibited Areas designated under the Conservation of Wildlife Act (Chap. 67:01) and Forests Act (Chap. 66:01), respectively.
- **Tobago House of Assembly (THA):** directly responsible for formulating and implementing policy for the conservation of biodiversity resources in Tobago, including land and marine protected areas. The various Divisions and Departments involved in PAs management include:
  - **Division of Agriculture, Marine Affairs and the Environment**
    - **Department of Natural Resources and the Environment (DNRE):** responsible for managing the Main Ridge Forest Reserve, a proposed ESA, and the Tobago wildlife sanctuaries.

---

<sup>2</sup> The United Nations defines civil society as including NGOs, academics, research institutions and corporations as disseminators of information or providers of services and shapers of society.

- **Department of Marine Resources and Fisheries:** responsible for managing the Buccoo Reef /Bon Accord Lagoon Complex Protected Marine Area, a proposed ESA.
  - **Division of Tourism and Transportation:** provides training and guidance to resource users on the marketing of protected areas in Tobago for educational interpretation and recreation.
- **Environmental Management Authority (EMA):** directly responsible for designating and coordinating the management of ESAs by the legally designated management authorities such as the Forestry Division and the Tobago House of Assembly. EMA also ensures that:
  - Stakeholder Management Committees for ESAs are established to ensure that NGO, CBOs and communities have a voice and can participate in management, planning and in providing advice;
  - anthropogenic sources of noise are strictly limited within ESAs under the Noise Pollution Rules, (2001);
  - water pollution is strictly controlled within ESAs under the Water Pollution Rules, (2001) as amended in 2006; and
  - physical development is done in a manner that does not damage or degrade the environment (including ESAs) under the Certificate for Environmental Clearance Rules, (2001).
- **Chaguaramas Development Authority (CDA):** established under the Chaguaramas Development Act (Chap. 35:02) to undertake development of the North-West Peninsula of Trinidad in accordance with a development plan. The entire North-West Peninsula of Trinidad, including the offshore islands of Gaspar Grande, Gasparillo, Monos, Huevos and Chacachacare, were vested in the CDA on October 9, 1974. The Authority is not only responsible for the management of the biological resources in the forests and marine areas of the lands vested to it, but also the development of build-up areas which includes, *inter alia*:
  - laying out, construction and maintenance of roads, construction and maintenance of buildings, and other building and engineering operations as may be necessary or desirable; and
  - provision and maintenance of car parks, piers, public parks or gardens and other public amenities

The Ministry of National Security also occupies lands within the North-West Peninsula. This has implications for access, regulation of usage etc. since national security needs often in practice supersede the jurisdiction of the CDA, even though the latter is formally the landlord. Other agencies also have lesser roles in managing the offshore islands, including the Port Authority and the Maritime Services Division of the Ministry of Works and Transport.

- **Fisheries Division, Ministry of Food Production, Land and Marine Resources:** is directly responsible for managing marine fisheries and has legislative responsibility for designating prohibited areas in the marine environment of Trinidad and Tobago. To date, only restrictions for demersal trawling have been established.
- **Water and Sewerage Authority:** under the Water and Sewerage Act (Chap. 54:40), may define and prohibit or regulate activities in areas (known as watershed protection areas) for the purpose of protecting surface or groundwater water against pollution.
- **Ministry of Community Development and the National Heritage Trust of Trinidad and Tobago:** directly responsible for appointing the National Heritage Trust of Trinidad and Tobago, this in turn is responsible for conducting inventories of, and approving, properties of interest as heritage sites, and maintaining a Register of these properties.
- **Town & Country Planning Division (TCPD), Ministry of Planning, Economic and Social Restructuring and Gender Affairs:** is engaged primarily in development planning, and development control, which includes monitoring of development. This includes managing the physical environment by ensuring that development on land does not adversely affect the coastal and marine environments. This includes the location of pipeline wayleaves, sea protection structures attached to the coast, and liquid effluent being discharged from coastal developments. In addition, the Town and Country Planning Division in conjunction with the Forestry Division and the Environmental Management Authority allocates lands for communal parks, game and bird sanctuaries, protection of marine life as well as environmentally sensitive areas and species habitat. The legislation also allows the Minister responsible for town and country planning to issue a “tree preservation order” where this is considered to be merited. The National Physical Development Plan for Trinidad and Tobago was made statutory in 1984 and had a 20-year time line. Given the fact that the next 20 year plan is still to be prepared, and the validity of the strategic initiatives of the 1984 Development Plan, planning activities continue to be guided by the existing National Physical Development and the several Local Area Plans being prepared for the country.
- **the Commissioner of State Lands** is the landlord of **All State Lands** inclusive of the sea bed in Trinidad and Tobago and has the power to designate other agencies to manage such land under the State Lands Act (Chap. 57:01).

### **1.3.2 Government agencies without legal mandates for designating and managing PAs**

There are several other government agencies without specified legal mandates for designating PAs and/or their subsequent management. However, these agencies play a *de facto* role in managing PAs, some with small roles and others with substantial functions. They include the following:

- The **Multilateral Environmental Agreements Unit** of Ministry of Housing and the Environment is responsible for treaties that include PAs such as the Convention on Climate Change, Convention on Biological Diversity, and Convention on Desertification.
- **Institute of Marine Affairs (IMA)**: is a research institute with an indirect, advisory role. However, the IMA has been involved in Management Planning for wetland and near-shore areas including Buccoo Reef, Nariva Swamp and Speyside.
- **National Reforestation and Watershed Rehabilitation Project (NRWRP), Ministry of Housing and the Environment**: created in 2003 to restore forests and rehabilitate watersheds, including within protected areas such as Forest Reserves, by involving and empowering community-based organisations. While it has no jurisdiction in the management of protected areas, it is implementing a vision of “Enhanced forests that are sustainably managed for the equitable benefit of all our citizens.” This programme will operate for 10 years and has a target to replant 33,030 acres (13,212 hectares) of forest of which 11,000 acres (440 hectares) will be devoted to watershed rehabilitation.
- **Regional Corporations**: have the responsibility of managing heritage parks primarily intended for recreation within their boundaries. For example at the Devil’s Woodyard, picnic and small scale recreational facilities are managed by the Princes Town Regional Corporation.

### **1.3.3 Multi-sectoral committees**

Various multi-sectoral committees have been established, with representatives from government, and civil society, to advise on and assist with coordinating the management of protected areas. Some of the committees are specifically mandated by enabling legislation (e.g. the Wildlife Conservation Committee under the Conservation of Wild Life Act, Chap. 67:01) or were established by Cabinet to achieve a specific purpose, while others may be *ad hoc* in nature. These committees include:

- **Wildlife Conservation Committee**: to advise the Minister on all matters pertaining to the conservation of wildlife in Trinidad and Tobago;
- **Interim Management Committee of the San Fernando Hill Natural Landmark**: to establish policy guidelines, make recommendations for facility management services, establish an appropriate fee structure, and

advise/determine rental and lease fees for lands and facilities acquired by the State;

- **Honorary Game Wardens' Administrative Committee:** to advise and report to the Minister on activities of the Honorary Game Warden Programme and develop and administer the programmes, activities, funding and human resource management (appointment, disciplinary procedures, termination) of the Honorary Game Warden Programme;
- **National Wetlands Committee:** to provide technical and scientific advice on wetlands conservation, management and wise use; to advise on, coordinate, and oversee activities for the implementation of the Ramsar Convention; to formulate and review development plans and management plans, and to develop and implement education/public awareness programmes. The National Wetlands Committee proposes to create **Local Wetlands Committees** for individual wetlands;
- **Caroni Swamp National Park and Bird Sanctuary Management Committee:** to direct the management and affairs of the protected area, including financial planning and fee collection, advertising and promotion and educational programmes; and
- **ESA Stakeholder Management Committees (SMCs):** established by the EMA's Board of Directors under the Environmental Management Act Chap. 35:05 (No. 3 of 2000) and the Environmentally Sensitive Areas Rules (2001) for each ESA. These are jointly chaired by the EMA and the relevant legal management authority and include representatives from key government agencies, nongovernmental organisations, (NGOs), community based organisations (CBOs) and academic institutions. At present, there is no private sector representation. They primarily have an advisory role, although discussions to expand this role are ongoing in existing SMCs. It should be noted that there is no formal specific legislative arrangement in place that will allow an EMA established SMC to provide advice to other Government agencies that are involved in PA management.
- A role is also played by **Boards established to direct Statutory Authorities**, for example the Chaguaramas Development Authority and the Environmental Management Authority.

#### **1.3.4 Civil society involvement**

Apart from their involvement on stakeholder committees, the various NGOs, CBOs, academic institutions and the private sector play an important role in the direct management of PAs in Trinidad and Tobago. These stakeholders manage privately owned or state owned sites or "co-manage" sites alongside the Government. They also assist with research, monitoring, trail maintenance, visitor management, education and awareness, and livelihood development. Examples are outlined below:

- (a) **Protected areas owned and managed by civil society organisations** include parts of the Arima Valley managed by the Asa Wright Nature Centre and a section of the Pointe-a-Pierre Refinery managed by the Pointe-a-Pierre Wildfowl Trust, both of which are non-profit conservation and education trusts.
- (b) **Civil society organisations informally managing state lands** include groups such as Fondes Amandes Community Reforestation Group, which manages and protects a portion of forest in the St Anns valley from deforestation due to forest fires.
- (c) **Privately owned and managed protected areas** include Grafton Caledonia Wildlife Sanctuary, Vega de Oropouche, La Vega, Englishman's Bay Estate, Charlotteville Estate, Arnos Vale etc.
- (d) **Protected areas co-managed by civil society organisations** include community groups assisting in the protection of marine turtle nesting sites which conducts patrols of sea turtle nesting beaches and assists with law-enforcement, research, monitoring and education; and the Sundew Tour-guiding Services which assist with trail maintenance and monitoring at the Aripo Savannas ESA.

Additionally, the University of the West Indies and NGOs such as the Buccoo Reef Trust and the Caribbean Forest Conservation Association (CFCA) have been engaged in research and provided expertise towards the management of PAs. Stakeholder participation has contributed to the success of PAs management in Trinidad and Tobago by providing a number of important benefits, including:

- Incorporation of a wide range of perspectives and ideas, and pay attention to needs and expectations of all, resulting in improved management;
- improving the knowledge and skills of all stakeholders;
- increasing the likelihood of stakeholder support for management (often called "buy-in") through involvement in decision-making;
- providing a forum for pro-actively identifying conflicts between users and negotiating solutions to them;
- contributing to stakeholder empowerment and local institutional development, especially when the sharing of management responsibility is involved.

The degree to which these benefits can be realised depends directly on the type and depth of the participatory process. Challenges to facilitating effective and equitable stakeholder participation in PAs management in Trinidad and Tobago include:

- insufficient education and awareness among key stakeholders and the public on the importance of PAs management in protecting the goods and services that PAs can provide;

- insufficient education and awareness of the public regarding potential roles they could play in management;
- the existing legal framework does not easily allow and encourage civil society participation in management and co-management of PAs. If such arrangements are to be formalised and encouraged, significant changes will be needed to the existing legislative framework;
- weak history of government agencies engaging NGOs, CBOs and the private sector in management resulting in limited opportunities and institutions for involvement of communities and civil society organisations in decision-making and management;
- poor linkages between government agencies and academic research institutions to encourage research that informs management; and
- limited financial and human resource capacity of civil society organisations.

## 2.0 Policy context

The Government is committed to incorporating PAs management in national planning to create a new PAs plan and the establishment of new PAs across the country. Existing multi-sectoral policies and plans with an environmental focus provide important elements of a framework of principles and broad approaches that will inform and guide the development of the Protected Areas Policy. For example:

- The ***Plan for a System of National Parks and other Protected Areas (1980)*** The 1980 Systems Plan proposed a classification system with six categories of management (Scientific Reserves, National Parks, Natural Landmarks, Nature Conservation Reserves, Scenic Landscapes and Recreation Parks) and identified 61 sites for protection within the System, including sites of natural as well as historical and cultural value.
- ***Draft Chaguramas Development Plan:*** Section 16(1) of the Chaguramas Development Act (Chap 35:02) requires the development of a plan to guide the management of the lands vested to the Chaguramas Development Authority (CDA). The Plan was developed in 1974 to allow the North-West Peninsula of Trinidad to be vested to the CDA. The plan has been revised and updated. This new draft Plan provides the basis for actions to properly manage the North-West Peninsula of Trinidad including forests, marine environment and off-shore islands.
- ***Final Report on the National Parks Draft Management and Physical Plan and Additional Studies (1996)*** The Report was developed by CFCA under the 1996 World Bank Project, and was approved by Cabinet in 2001. It prioritised areas from the Systems Plan for designation as national parks.

- The ***National Tourism Policy*** recognises the importance of enhancing, protecting and preserving the natural and social environment, including through the designation of areas for management. A 2007 draft has been presented to the public for comment.
- The ***National Biodiversity Strategy and Action Plan (NBSAP)*** calls for the development of legislation to enable establishment of protected areas for biodiversity conservation.
- The ***National Wetlands Policy*** promotes public protection of outstanding examples of wetlands in private ownership, and inclusion of outstanding examples of each type of wetland in the national system of national parks and other protected areas.
- The ***National Water Resources Management Policy*** promotes the protection of critical watershed areas and coastal areas.
- The ***National Environmental Policy (NEP)*** includes provisions for the designation of Environmentally Sensitive Areas (ESAs), integrated planning and designation of areas to protect coastal and marine areas, maintaining strictly protected forest areas, and preserving representative samples of wetland areas.
- The ***National Action Programme to Combat Land Degradation in Trinidad and Tobago 2006 – 2020*** promotes spatial planning for sustainable physical development through a National Physical Development Plan and plans at the regional, local and ecosystem levels to facilitate sustainable use and protection of land resources.
- The new ***National Forest Policy*** promotes the designation and management of areas for conservation of forest biological diversity and sustainable use of forests. The 1942 approved Forest Policy and the 1981 and 1998 drafts provide current policy guidance.
- ***Draft Climate Change Policy (2010)*** provides guidelines for the development of an administrative and legislative framework, in harmony with other sectoral policies, for a low-carbon development path for Trinidad and Tobago through strategies and actions to address climate change, including sectoral and cross-sectoral adaptation and mitigation measures. In this regard, the Climate Change Policy recognises the critical role that forest play in mitigation and adaptation to climate and the need for sustainable management of forests.

Key national legislation, policies, programmes and plans relevant to protected area management are listed in Appendix 2. At the international and regional level, Trinidad and Tobago is also a signatory to a number of treaties relevant to protected area management. These are listed in Appendix 3.

In the determination of a new policy framework for PAs it is also important to reflect on how other sectoral policies will impact on, and may potentially conflict with, a policy for PAs management. These include:

- The **legal and policy framework for land use planning**, which is generally weak in Trinidad and Tobago, with the last National Physical Development Plan passed by Parliament in 1984 and, although the Plan had a twenty-year horizon, the law mandates the revision of this Plan every five years, which has not taken place.
- The **energy sector**, which is the main engine of the economy and is a driving force on land-use. Despite the lack of an approved energy policy for Trinidad and Tobago, the Government has articulated the need for sustainable development throughout the energy sector, including among activities such as the exploration, production, refining and marketing of petroleum and its by-products. While it has taken a proactive stance in managing the environmental repercussions of the energy sector, leases for mining blocks have generally not excluded PAs.
- The **draft Quarry Policy** similarly takes note of the environmental and health effects of uncontrolled quarrying on people living near quarry sites and the need to use tools to predict quarrying impacts on the environment; however, there is no explicit reference in the policy to taking PAs into account in managing the sector.
- Plans for **developing the land-based transportation infrastructure** have included developing major roads within or alongside PAs. These include the long proposed connecting road between Matelot and Blanchisseuse that would pass near the Matura National Park and as detailed in Budget statements of fiscal years 2008-2009 and 2009-2010 and alternatively called an Eco Roadway in the Budget for fiscal year 2004-2005.

Mainstreaming the environment in sectoral policies to resolve conflicts between development and protection is an approach that the Government has begun to use when planning at the highest levels. Evidence of in-roads made in terms of mainstreaming the environment can be found in the NEP, which speaks to the need for valuing environmental goods and services, including clean air, clean water, carbon sequestration, protection from extreme weather events, livelihoods potential from food production, craft, and opportunities for recreation, when evaluating economic needs and alternatives.

While there are important elements of a PAs policy in existing national policies, there is no single comprehensive policy on PAs in Trinidad and Tobago. The existing policy environment is highly complex and fragmented, creating the need to harmonise and rationalise the different categories of PAs, through a single unified policy. Such an approach will create an enabling environment for the effective and efficient management of a national system of PAs that addresses key issues such as:

- the existing complexity of designating and managing PAs;
- gaps in the designation and management of PAs;
- identifying and providing the environment for resolving conflicts among policies;

- reducing the duplication of efforts in protecting individual areas; and
- prompting the development of overarching land-use policies such as a national land-use policy.

### **3.0 Scope**

This National Protected Areas Policy will provide guidelines for the selection, designation and management of all PAs established for the conservation of natural heritage in Trinidad and Tobago. The Policy recognises that these areas may contain features with significant cultural, spiritual/religious, historical, and archaeological heritage value and will therefore require specific management in collaboration with relevant stakeholders.

This Policy therefore recognizes that areas primarily designated for the management of cultural, spiritual/religious, historical, and archaeological heritage will be designated and managed through the National Trust established under the National Heritage Trust Act, (Chap. 40:53).

This Policy will provide guidance for the development of legislation that will enable Trinidad and Tobago to establish an appropriate administrative and institutional framework for the designation and management of a national system of protected areas. This framework will be easily understood; comprehensive; include a harmonised classification scheme based on management objectives; be clearly organised and described; and provide clear guidance on the establishment of an appropriate legal and administrative framework. Accordingly, the currently evolving national and local-area physical development plans and other national policies for Trinidad and Tobago should be made consistent with this Policy.

This Policy defines a protected area as “a geographically defined area of land, body of freshwater or sea, or combinations of these, which is designated and managed through legal or other effective means to:

- conserve biological diversity thereby maintaining genetic, species and ecosystem diversity, evolutionary and ecosystem patterns and processes;
- maintain ecosystem goods and services and facilitate sustainable use; and
- provide recreational, educational, cultural and spiritual/religious opportunities and facilitate the development of sustainable livelihoods.”

In view of the range of goods and services provided by PAs, and the importance of the livelihoods and quality of life that they support, the national system of PAs must be flexible enough to encompass a range of management options, which can be tailored to meet the specific objectives of any particular area.

In this Policy, “management” includes the full range of measures and actions which determine the extent to, and conditions under which PAs are managed.

The National Protected Areas Policy is envisaged to be a living document that will be monitored and formally reviewed and updated every 10 years to reflect new needs, issues and opportunities, and to adapt to changing conditions.

#### **4.0 Vision**

The establishment of an integrated system of PAs that ensures conservation of the full diversity of natural ecosystems in Trinidad and Tobago whilst allowing for the sustainable use of these resources and providing equitable access to opportunities for their recreational, educational, research, cultural, spiritual/religious and sustainable livelihoods.

#### **5.0 Goal**

The purpose of this National Protected Areas Policy is to establish an appropriate framework for the selection, legal designation and management of a national system of PAs. This includes elaboration of a classification system for the designation of a comprehensive and rationalised system of PAs, the establishment of effective institutional arrangements for management, development of mechanisms for sustainable financing, identification of human resource capacity needs, resolution of policy conflicts, development of enabling legislation, and tools and guidelines for effective management.

#### **6.0 Principles and values**

The overarching principles have informed the formulation of this Protected Areas Policy statement and which will guide its implementation are:

**Respect and care for the community of life:** human beings and communities are part of a larger ecosystem in which all forms of life deserve to be respected and maintained.

**Ecosystem approach to protected areas management:** PAs will be managed as complex ecological systems, with the maintenance of ecosystem functions and ecological processes as a critical objective. This ecosystem-based approach assumes that all management decisions will explicitly account for the impact of management interventions on ecological patterns and processes at the landscape scale.

**Evidence-based management:** policy formulation and implementation will be based, to the maximum extent possible, and having regard to the precautionary principle, on tangible evidence and information, including scientific data, results of scientific research, and popular knowledge where appropriate, as the basis of decision-making.

**Precautionary principle:** notwithstanding statements on Evidence Based Management, in cases where there is a lack of scientific certainty as to the likelihood, magnitude, or causation of a potentially negative environmental impact,

the course, or courses, of action taken will avoid serious or irreversible potential harm.

**Sustainability and carrying capacity:** all forms of resource use and patterns of development will remain within the capacity of a specific PA, and of the country as a whole, to support and maintain these activities indefinitely.

**Maintenance of future options:** the patterns of production and consumption that will be adopted will safeguard the regenerative capacities of natural ecosystems, human rights and well-being, and thus maintain options for future generations.

**Valuing of protected area goods and services:** the tangible and intangible values of PAs, and of the goods and services they provide, will be recognised by all, and they must be taken into account in the design and implementation of management arrangements.

**Payment for protected area goods and services:** users and beneficiaries of PA goods and services will be aware of, and contribute to, the cost of PA management and conservation, including paying for costs of degradation of these areas caused by unsustainable activities.

**Enforcement and effective control:** Giving effect to this policy requires implementation, and policy measures and instruments have little value unless they are properly enforced. In this regard, the State, and actors in civil society will take all measures to ensure that this policy and its enabling legislation are adequately enforced, through provision of adequate personnel and material.

**Policy integration:** PA management, is a complex process that must recognise the multiple functions and uses of ecosystems and that must ensure that all decision-making is integrated and multi-disciplinary. This will require, as far as is possible, that other relevant policy areas and instruments should be linked to and harmonised with the PAs policy.

**Adaptation and “learning-by-doing”:** ecological, economic, social and cultural conditions are constantly evolving, and policy and management responses must adapt to that change, through continuous improvement and innovation. Monitoring and evaluation will form an integral part of the processes and instruments for implementation of this policy, with data, results and lessons being used to make management adaptive and responsive.

**Accountability:** there will be fairness, transparency and accountability in the formulation, adoption and implementation of policy instruments and measures.

**Subsidiarity:** action will be taken at, and responsibility should be delegated to, the most effective and appropriate level of governance (e.g. local, national).

**Empowerment, collaboration and participation:** the costs, benefits and responsibility for PA management will be shared among all stakeholders, who should have opportunities to share in managing resources and the right to participate in decision-making. The value systems, interests and priorities of all stakeholders must therefore be understood and respected and mechanisms and structures should be put in place to institutionalise participatory PA management.

***Inter-generational equity:*** patterns of use and management within PA will ensure that there is equitable access to the natural and cultural heritage within these areas, for the present and future generations.

## **7.0 Objectives**

In designating and managing PAs, Trinidad and Tobago will pursue three mutually reinforcing **objectives**:

1. to conserve the country's natural heritage, genetic, species, ecosystem diversity and functionality, evolutionary and ecosystem processes and biogeochemical cycles;
2. to conserve the country's cultural, spiritual/religious and historical heritage; and
3. to optimise the contribution of PAs to sustainable livelihoods and human well-being, including opportunities for resource mobilization, education and recreation .

In order to achieve these strategic objectives, the following actions are necessary to the establishment of a PAs system:

- a) clear classifications for PAs;
- b) criteria for the identification of PAs;
- c) recommendations for rationalising institutional arrangements for management of PAs;
- d) guidelines for institutionalising participatory approaches to PAs management;
- e) guidance for development of an enabling legislative framework;
- f) guidance on conflict resolution for conflicting uses of PAs; and
- g) guidelines for the development of the necessary human and financial resource capacity.

## **8.0 Policies to achieve strategic objectives**

### **8.1 Conservation of natural heritage and ecosystem diversity**

Recognising the critical contribution of the country's natural heritage to Trinidad and Tobago, the Government, in collaboration with all relevant stakeholders, shall establish a system of PAs within five years of adoption of this Policy to:

- i. conserve the full diversity of natural ecosystems in Trinidad and Tobago;

- ii. preserve genetic materials as elements of natural communities, prevent the loss of any plant or animal species, maintain biological diversity, and protect natural ecological patterns and processes;
- iii. protect and restore populations of rare, endangered, and endemic species and the habitats on which they depend for survival;
- iv. develop systems for *ex-situ* and *in-vitro* conservation of species of national interest to facilitate the restoration of populations of these species as necessary and appropriate;
- v. manage populations of species and areas of ecosystems that are used for extraction of goods (e.g. timber harvesting, wildlife hunting, harvesting of craft materials, non-timber forest products, medicinal and aromatic plants) in a manner that ensures their long-term viability;
- vi. develop systems of buffer zones and ecological corridors to maintain PAs' integrity and function, and to protect ecosystems and the services that they provide; and
- vii. protect samples of representative, important, rare or unique biological and geological features

## **8.2 Conservation of cultural, spiritual/religious and historical heritage**

Recognising the critical contribution of the country's cultural, spiritual/religious and historical heritage to Trinidad and Tobago, and the leading role played by the National Trust in conservation of built heritage, the Government, in collaboration with all relevant stakeholders, shall establish a system of PAs within five years of adoption of this Policy to:

- i. protect and encourage customary use of biological resources in accordance with traditional cultural and spiritual/religious practices that are compatible with conservation or sustainable management; and
- ii. collaborate with the National Trust and other relevant stakeholders to support the preservation for future generations, any historic, rare, unique, internationally important, outstanding or indigenous monument, fossil, place or site of natural beauty or national, historic, scientific or archaeological interest.

## **8.3 Sustainable livelihoods and human well-being**

Recognising the critical contribution of the country's natural heritage to the socio-economic development of Trinidad and Tobago, the Government, in collaboration with all relevant stakeholders, shall establish a system of PAs within five years of adoption of this Policy to:

- i. protect the supply and quality of basic natural resources that support sustainable economic and human development, including socio-economic benefits to local communities and the wider population;
- ii. restore, protect and enhance ecosystems to ensure the availability of essential resources, such as trees, wildlife, edible plants, medicinal and aromatic plants and animals for sustainable economic use;
- iii. restore and protect ecosystems that provide important ecological services including:
  - a. restoring, protecting and enhancing mangroves, wetlands, coral reefs, beaches, forests and other important ecosystems to reduce the risk of disasters;
  - b. contributing to the sustainability of the tourism sector by restoring, protecting and enhancing beaches, coastal waters, coral reefs, mountains, forests, wildlife, and developing or enhancing nature interpretation and cultural/spiritual/religious opportunities;
  - c. contributing to the sustainability of the agricultural sector by restoring, protecting and enhancing ecosystems that provide important supporting ecological services (e.g. soil conservation, pollination, sources of wild genetic stock);
  - d. restoring, protecting and enhancing watersheds to support the supply and quality of water;
  - e. restoring, protecting and enhancing ecosystems (e.g. scenic landscapes) that provide recreational, spiritual/religious and social benefits;
  - f. restoring, protecting and enhancing mangroves, coral reefs, wetlands and other ecosystems for the provision of fish nurseries;
  - g. restoring, protecting and enhancing forests, wetlands and other ecosystems important in carbon sequestration;
- iv. promote environmentally sound land, coastal and marine area management;
- v. provide a variety of natural systems for research, formal and informal education, and study and the monitoring of environmental conditions; and
- vi. conserve and promote traditional environmental knowledge and sustainable cultural uses and practices.

## **9.0 Policies to guide implementation**

### **9.1 Management arrangements:**

In order to administer and effectively manage the implementation of this National Protected Areas Policy, the Government, in collaboration with all relevant stakeholders, shall within three years of adoption of this Policy:

- i. undertake a process to establish a Forest and Protected Areas Management Authority to administer the coordination and implementation of the National Protected Areas Policy for Trinidad and Tobago. This Authority shall:
  - a. be established so as to facilitate:
    - i. efficient coordination of management of terrestrial, coastal and marine areas;
    - ii. transparency and accountability in management;
    - iii. development of partnerships with stakeholders for participatory protected area management;
    - iv. flexibility in responding to PA management needs;
    - v. development of the necessary multi-disciplinary capacity for PA management;
    - vi. human resource management that is suitable to the special demands of managing natural areas;
    - vii. independent access to and management of funding;
    - viii. efficient and effective co-ordination with other Governmental bodies to minimize conflicts which arise through multiple demands on land use
  - b. have an Executive Board to guide its operations including the recruitment of the Managing Director/Chief Executive Officer of the Authority. The Board shall comprise representation from government, community organisations, non-profit organisations, academic institutions, and the private sector. Its membership will encompass the disciplines of protected area management, environmental management, wildlife management, ecology, land use planning, tourism, fisheries, forestry, social and community development, local government, law, and business. Among the member of the Executive Board one member shall represent the Tobago House of Assembly, while the Director of Town and Country Planning and the Commissioner of State Lands shall serve as ex-officio members;

- c. appoint such committees, working groups, or councils to assist in the performance of its functions;
- d. enter contracts with national, regional and international agencies involved in PAs management
- e. establish, administer and utilise a Forestry and Protected Areas Fund to enable implementation of this Policy. The Fund will be financed via the deposition fees, penalties and fees (including compensation payments) collected in relation to the implementation of the Protected Area Policy and from external sources such as multilateral donor agencies and Governments;
- f. establish and maintain a network of offices, and develop an information technology network and suite of e-services that would facilitate the decentralization of its services to enable the efficient and economic administration of protected areas;
- g. have the power to remove squatters from lands vested in the Authority;
- h. have sufficient staffing, training and equipment to effectively and efficiently implement the protected areas policy;
- i. function to:
  - i. develop and implement policies and programmes for the efficient management of terrestrial, coastal and marine protected areas in Trinidad and Tobago, including recommendations for the revision and updating of this National Protected Areas Policy and its enabling legislation;
  - ii. implement provisions under national laws and regulations governing PAs;
  - iii. make recommendations for the rationalisation of policies, laws, regulations, and administrative arrangements for the management of PAs in Trinidad and Tobago;
  - iv. collaborate with relevant government agencies and other stakeholders for management of PAs, including:
    - the management of cultural, spiritual/religious, historical and archaeological features located on PAs under its jurisdiction;

- the management of areas surrounding PAs so as to minimise negative impacts;
  - development of mechanisms for sharing of information and resources;
  - development and implementation of collaborative programmes (e.g. for research and management);
- v. delegate management functions to relevant government agencies and other appropriate stakeholders as necessary;
  - vi. develop an annual report on the implementation of the PAs system to be presented to the Parliament
  - vii. establish and implement appropriate management arrangements for each PA that may include arrangements for management of private land, and management of state and/or private land by communities, civil society organisations, or the private sector;
  - viii. establish multi-stakeholder management committees as required to coordinate and facilitate the management of particular terrestrial, coastal and marine PAs. These would include representatives of all of the government agencies with responsibility for PAs management as well as other key stakeholders from civil society and the private sector;
  - ix. collaborate with existing national committees with responsibilities and interests relevant to PAs management;
  - x. strengthen the financial and human capacity of key government agencies and other stakeholders with responsibility for and involved in PAs management;
  - xi. strengthen structures and mechanisms for effective inter-agency and inter-sectoral communication, collaboration and coordination;
  - xii. strengthen structures and mechanisms for the enforcement of the enabling legislative framework for this Policy.
- ii. design a mechanism in collaboration with the Tobago House of Assembly for the coordination of the implementation of the National Protected Areas Policy on the island of Tobago

## **9.2 Protected Areas Classification System**

The Government in collaboration with all stakeholders shall within five years of adoption of this Policy establish the under mentioned categories of protected areas in order to accomplish the objectives of the Protected Areas Policy.

The new National Protected Area Classification System shall provide for the adoption of the IUCN classification system within the context of the national circumstance. In this regard, the IUCN classification system has already been adopted under the ESA Rules of the Environmental Management Act Chap. 35:05. Accordingly, in the adoption of the following classification system, the Government will repeal and amend as appropriate the ESA Rules, and the relevant sections of the Forests Act (Chap. 66:01), State Lands Act (Chap. 57:01) and Conservation of Wild Life Act (Chap. 67:01) to make these Acts consistent with nomenclature adopted in this policy.

In establishing the new Classification System the Government shall take into consideration the specific selection criteria outlined in Appendix 4 and shall adopt the management regimes outlined here under:

### **9.2.1 Scientific Reserves**

The Government shall designate terrestrial, marine or freshwater areas or combinations of these as Scientific Reserves, which shall be reserved primarily to protect nationally, regionally, or globally outstanding ecosystems, species and/or geo-diversity features that have been formed mostly or entirely by non-human forces and which would be degraded or destroyed if subjected to all but very light human impact.

In establishing management regimes for such Scientific Reserves the Government shall take appropriate measures including, but not restricted to:

- strictly limit human disturbance of these areas by limiting access to research, conservation and monitoring activities through an appropriate system of permits;
- develop appropriate public outreach activities to ensure public recognition of the value of such areas;
- prevent harvesting of biodiversity for commercial and recreational purposes within these areas;
- regulate the sustainable scientific harvesting of biodiversity through an appropriate permit system;
- prevent human encroachment in any form, particularly the establishment of permanent human structures within these sites;

- prevent any activity leading to alteration/damage/change of the ecological integrity of the area including environments above or below the designated area;
- regulate land-use and activities around designated Scientific Reserve to ensure that ecological connectivity and integrity is maintained with other natural ecosystems;
- establish programmes of scientific monitoring of the area to ensure that its large-scale ecological processes, and characteristic species and ecosystems are not compromised by human activities within and around the Scientific Reserve; and
- develop where feasible means to facilitate the payment for ecosystem services provided by these protected landscapes and seascapes to different user groups.

### **9.2.2 Special Conservation Reserves**

The Government shall designate unmodified or slightly modified terrestrial, marine or freshwater areas or combinations of these as Special Conservation Reserves. These areas shall be reserved primarily to protect the long-term ecological integrity where natural forces and processes predominate. They will be managed to ensure that they are undisturbed by significant human activity and free of modern infrastructure so that current and future generations have the opportunity to experience such areas. In designating such areas the Government shall ensure that the site is representative of original extent of the ecosystem, possess complete or near-complete native faunal and floral assemblages, and be large enough to protect biodiversity, maintain ecological processes and ecosystem services.

In establishing management regimes for such Special Conservation Reserves the Government shall take appropriate measures including, but not restricted to:

- ensure the absence of permanent infrastructure, extractive industries, agriculture, motorized use, and other indicators of modern or lasting technology in these areas;
- provide opportunities for public recreation that are limited to simple, quiet and nonintrusive means of travel (i.e., non-motorized);
- prohibit harvesting of biodiversity for commercial or recreational purposes;
- regulate land-use around designated Special Conservation Reserves to ensure that ecological connectivity is maintained with other natural ecosystems;
- prevent any activity leading to alteration/damage/change of the ecological integrity of the area including environments above or below the designated area;

- allow low-impact, minimally invasive educational and scientific research activities, when such activities cannot be conducted outside the Special Conservation Reserves;
- establish programmes of scientific monitoring of the area to ensure that its large-scale ecological processes, and characteristic species and ecosystems are not compromised by human activities within and around the Special Conservation Reserve;
- develop where feasible means to facilitate the payment for ecosystem services provided by these protected landscapes and seascapes to different user groups;

### **9.2.3 National Parks**

The Government shall designate natural or near-natural terrestrial, marine or freshwater areas or combination of these as National Parks, which shall be reserved primarily for the protection and conservation of large-scale ecological processes, and the complement of species and ecosystems characteristic of the area, and which also provides for ecologically and culturally compatible spiritual, scientific, educational, and recreational and visitor opportunities.

In establishing management regimes for such National Parks the Government shall take appropriate measures including but not restricted to:

- regulate visitor usage to maintain the ecological integrity of the area through appropriate management means, including the use of entry permits and establishing zones for different uses/access;
- establishment of a system of visitor, and other protected areas user fees for the sustainable financing for these National Parks;
- establish facilities to enhance/strengthen the cultural, educational, recreational and visitor opportunities within the area including interpretative signage, trail heads and trails, parking, toilets, etc.;
- regulate the harvesting of biodiversity (hunting, fishing, scientific collection etc.) for scientific and recreational purposes by controlling access through an appropriate permit system;
- prohibit harvesting of biodiversity for commercial purposes;
- establish programmes of scientific monitoring of the area to ensure that its large-scale ecological processes, and characteristic species and ecosystems are not compromised by human activities within and around the National Park;
- prohibit any activity leading to alteration/damage/change of the ecological integrity of the area including environments above or below the designated area;

- regulate land-use around designated National Parks to ensure that ecological connectivity is maintained with other natural ecosystems;
- develop means to facilitate the payment for ecosystem services provided by these protected landscapes and seascapes to different user groups;

#### **9.2.4 Natural Landmarks**

The Government shall designate terrestrial, marine or freshwater areas or combinations of these as Natural Landmarks, which shall be reserved primarily to protect specific outstanding natural features (including landforms, seamount, submarine caverns, springs, waterfalls, mountains, sea coves geological features such as caves or living features such as an ancient groves or archaeological sites) and their associated biodiversity and habitats.

In establishing management regimes for such Natural Landmarks the Government shall take appropriate measures, including but not restricted to:

- enact land-use and building codes that prevent irreversible damage to these natural landmarks;
- establish facilities to enhance/strengthen the cultural, educational, recreational and visitor opportunities within the area including interpretative signage, trail heads and trails, parking, toilets, etc.;
- provide controlled human use of these areas to ensure that the ecological or geo-morphological processes that maintain these features are not compromised by human activity;
- establish programmes of scientific monitoring of the area to ensure that its ecological processes, and characteristic species and ecosystems are not compromised by inappropriate human activities;
- prohibit any activity leading to alteration/damage/change of the ecological integrity of the area including environments above or below the designated area;
- regulate the harvesting of biodiversity (hunting, fishing, scientific collection etc.) for scientific and recreational purposes by controlling access through an appropriate permit system;
- prohibit harvesting of biodiversity for commercial purposes; and
- develop means to facilitate the payment for ecosystem services provided by these protected landscapes and seascapes to different user groups;

#### **9.2.5 Habitat or Species Management Reserves**

The Government shall designate terrestrial, marine or freshwater areas or combinations of these as Habitat or Species Management Areas, which shall be reserved primarily to protect particular species or habitats. The management of such areas will reflect this priority. In designating Habitat or Species Management

Reserves priority will be given to areas which are critical to the long-term conservation of these species or habitats on the landscape. These areas may require intensive management by the relevant responsible State Agency and/or its relevant State and civil society partners.

In establishing management regimes for such Habitat or Species Management Areas the Government shall take appropriate measures, including but not restricted to:

- ensure the recovery and/or restoration of a named species or habitat to a state that is no longer endangered or threatened, or ensure the ecological connectivity between other types of reserves established in this Policy;
- establish recovery plans and programmes to ensure that any designated Habitat or Species Management Reserve maintains the biodiversity elements for which the designation was originally assigned;
- provide the necessary means for regulation of human use and access to such Reserves in cases where such access is deemed inimical to the primary management objectives of the site;
- facilitate public education within such Reserves, in cases where the State Agency responsible for the Reserve has determined that such activities do not compromise the primary management objectives;
- prohibit any activity leading to damage of the ecological integrity of the area including environments above or below the designated area;
- prohibit the harvesting of biodiversity (hunting, fishing, timber extraction, non-timber forest produce extraction) for recreational or commercial purposes within these reserves;
- regulate the sustainable scientific harvesting of biodiversity through and appropriate permit system
- establish programmes of scientific monitoring of the area to ensure that its large-scale ecological processes, and characteristic species and ecosystems are not compromised by human activities within and around the Special Conservation Reserve;
- regulate access to such reserves for research, conservation and monitoring activities through an appropriate system of permits;

### **9.2.6 Protected Landscape or Seascape**

The Government shall designate terrestrial, marine or freshwater areas or combinations of these areas as Protected Landscapes or Seascapes, which shall be reserved primarily to protect areas where the interaction of people and nature over time has produced an area of distinct character with significant ecological, biological, cultural and scenic value, and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values.

In establishing management regimes for such Protected Landscapes or Seascapes the Government shall take appropriate measures, including but not restricted to:

- enact land-use and building codes that prevent irreversible changes to ecological, biological, cultural and scenic values within these landscapes or seascapes;
- establish facilities to enhance/strengthen the cultural, educational, recreational and visitor opportunities within these areas, including interpretative signage, trail heads and trails, parking, toilets, etc. where appropriate, and where these do not conflict with the primary goal of this designation;
- promote traditional land uses and livelihoods within these areas where such activities do not compromise the ecological, biological, cultural and scenic values that led to the sites original designation;
- establish programmes of scientific monitoring of the area to ensure that its ecological, biological and cultural characters are not compromised by inappropriate human activities;
- prohibit any activity leading to alteration/damage/change of the ecological integrity of the area including environments above or below the designated area
- regulate the harvesting of biodiversity (hunting, fishing, scientific collection etc.) for scientific and recreational purposes through an appropriate permit system;
- prohibit the commercial harvesting of biodiversity
- develop means to facilitate the payment for ecosystem services provided by these protected landscapes and seascapes to different user groups;

### **9.2.7 Sustainable Use Reserves**

The Government shall designate terrestrial, marine or freshwater areas or combinations of these as Sustainable Use Reserves, which shall be reserved primarily to conserve ecosystems, habitats and species, together with associated cultural values and traditional uses, through the implementation of natural resource management systems for the regulation of consumptive use of resources in these Reserves. These areas are generally large, with most of the area in a natural condition and where a proportion is under sustainable natural resource management.

In establishing management regimes for such Sustainable Use Reserves the Government shall take appropriate measures, including but not restricted to:

- promote the use of silvicultural techniques to ensure multiple sustained consumptive and non-consumptive use values in these Reserves;

- promote the use of wildlife and fisheries management techniques to ensure sustainable use of wildlife and fisheries resources within these Reserves;
- establish programmes of scientific monitoring of the area to ensure that its ecological and biological characteristics are not compromised by inappropriate human use in these reserves;
- regulate harvesting of biodiversity for scientific, recreational and commercial purposes through an appropriate permit system;
- develop means to facilitate the payment for ecosystem services provided by these protected landscapes and seascapes to different user groups;
- establish adaptive management systems which take an ecosystem approach to sustainable harvesting regimes for exploited species;
- ensure that management in such reserves do not lead to irreversible depletion of the living resources in these reserves.

### **9.3 Establishment of protected areas**

Upon implementation of the new National Protected Areas Classification System the government shall transfer existing protected areas to suitable categories in the new Classification System. Additionally, within five years of adoption of this Policy, the government through the Forest and Protected Areas Management Authority and in conjunction with all stakeholders shall:

- review all transferred PAs to re-classify, and adjust legal boundaries where necessary;
- establishment of mechanisms to ensure geographic and ecological continuity between PAs where possible;
- conduct a national gap analysis to identify priority areas for designation as new PAs;
- determine and implement targets for PAs coverage with the intention to exceed international norms.

### **9.4 Land use and physical development planning**

In order to protect and conserve the country's natural and cultural heritage through land use and physical development planning (for terrestrial, coastal and marine areas), the Government, in collaboration with all relevant stakeholders, shall within five years of adoption of this Policy:

- i. ensure that issues and needs relating to PAs management are integrated into national policies and plans, including the integration of the provisions and intent of this National Protected Areas Policy into:
  - a. the National Physical Development Plan, local land use plans and all physical development permitting processes;

- b. relevant national socio-economic development policies and processes (e.g. Tourism Policy, poverty alleviation strategies, energy policies, quarry policies, land settlement and housing policies, public utilities policies).
- ii. enforce the law and land settlement policies with regard to unplanned (and illegal) settlements in PAs;
- iii. develop mechanisms for compensation for damage to PAs as a result of unplanned and illegal activities including agriculture and residential squatting; and
- iv. take into account the real value of ecosystem services and products provided by natural ecosystems in PAs and their contribution to livelihoods in development decisions.

### **9.5 Conflicts in land use and physical development planning**

It is recognised that in exceptional cases national priorities may warrant the use of a PA or part thereof in a manner that is inconsistent with this Policy. Permanent or temporary de-reservation of any PA or part thereof, shall require approval from Parliament and national stakeholders through the use of transparent criteria and a process of broad consultation. This process will include the establishment of compensation and/or restoration requirements.

### **9.6 Participatory management**

In order to facilitate the equitable and effective participation of the private sector, academic institutions, NGOs, CBOs, communities and individuals in the management of PAs, the Government, in collaboration with all relevant stakeholders, shall:

- i. adopt a policy and legislative framework, guidelines, structures and mechanisms to institutionalise co-management and other forms of participatory PAs management, including mechanisms for stakeholder participation in the development, implementation, review and evaluation of all policies, plans and reports;
- ii. adopt and strengthen policy and legislative frameworks, guidelines, structures and mechanisms to enable delegation of appropriate management responsibilities (including monitoring and enforcement) to governmental and non-governmental stakeholders (e.g. community-based patrols, volunteer wardens, community wardens) and facilitating environmental agreements between the State and private landowners.

### **9.7 Conflict management**

Recognising that many different stakeholders with sometimes-conflicting perspectives and interests are involved in and affected by decisions regarding the establishment, use

and management of PAs, the Government, in collaboration with all relevant stakeholders, shall address conflicts between and among stakeholders in the implementation of the objectives of this National Protected Areas Policy by applying the Principles and Values of this Policy. In this regard, the mandate of the Environmental Commission will be extended to adjudicate appeals of decisions taken by the Forest and Protected Areas Authority.

## **9.8 Legislation**

The revision, development and declaration of supporting legal instruments (laws and regulations) will be required to effectively implement this National Protected Areas Policy and to achieve harmonization with the existing legislative framework. In order to achieve this, the Government, in collaboration with all relevant stakeholders, shall within three years of adoption of this Policy enact an enabling legislative framework to provide for the establishment of a system for the administration and management of PAs to conserve natural and cultural heritage in Trinidad and Tobago, which will include:

- a. establishing and empowering an effective institutional structure namely a Forest and Protected Areas Management Authority for the administration and coordination of PAs management;
- b. providing for the establishment and operation of a Forest and Protected Areas Fund;
- c. providing for the designation and management of different categories of PAs under the National Protected Area Classification System;
- d. providing for the establishment of alternative forms of management arrangements for PAs, including legal agreements with private landowners and civil society and private sector organisations specifying the management arrangements and respective roles and responsibilities for the PA;
- e. establishing guidance for the conservation, use and management of private lands which have been identified as sensitive or critical areas, or where activities are having a significant negative impact within or in close vicinity to PAs. Such guidance would include a spectrum of mechanisms such as voluntary compliance and incentives, with compulsory acquisition as a last resort;
- f. establishing mechanisms, processes and principles for coordination and stakeholder participation in PAs management;
- g. establishing requirements for the development and implementation of management plans;

- h. providing for sustainable financing mechanisms, including User Fees and Payments for Ecosystem Services (PES) schemes;
- i. providing for Licenses, Permits, Enforcement Notices, Cessation Orders, User Fees (including fees paid by beneficiaries of ecosystem services), Incentives and Fines;
- j. establish an appropriate framework for access to protected areas by researchers and the sharing of the benefits derived from such research;
- k. establish an appropriate structure of fines and other penalties which will serve as a deterrent to inappropriate use of protected areas or activities contrary to the Policy;
- l. revise or repeal as necessary the Forests Act (Chap. 66:01), the Conservation of Wild Life Act (Chap 67:01), the Environmentally Sensitive Areas Rules of the Environmental Management Act (Chap. 35:05), relevant Town and Country planning regulations, relevant local government legislation and other key enabling laws and regulations under these laws to ensure consistency with the new enabling legislation for PAs.

## **9.9 Harmonising policies**

In order to ensure that there is harmonisation of relevant policies and programmes with this National Protected Areas Policy, the Government, in collaboration with all relevant stakeholders, shall:

- i. address any areas of conflict with existing and proposed policies and programmes (e.g. land use planning policy, energy policy) by establishing appropriate Cabinet-appointed committees to advise the Government on mechanisms to resolve conflicts;
- ii. integrate the provisions of this National Protected Areas Policy into existing and proposed policies (e.g. National Physical Development Plan, National Action Programme to Combat Land Degradation, Energy Policy, Quarry Policy and Tourism Policy);
- iii. address gaps and areas of overlap with existing policies (e.g. National Action Programme to Combat Land Degradation, National Forest Policy, Draft Chaguaramas Development Plan) to ensure coherence and complementarity.

### **9.10 Management plans**

In order to give effect to the vision, goal, principles and objectives of this National Protected Areas Policy, the Authority, in collaboration with all relevant stakeholders, shall within five years of adoption of this Policy formulate and adopt:

- i. a National Protected Areas System Plan to implement the coordinated approach to the management of the PAs outlined under this policy;
- ii. ten-year Protected Area Management Plans for each PA to guide all aspects of management, including clarifying roles and responsibilities and ensuring coordination among various sectoral and agency strategic and work programmes and plans.

### **9.11 Financial mechanisms**

Adequate and reliable financial resources will be needed for effective designation and management of PAs in Trinidad and Tobago. Each PA will require annual budgets for development and implementation of management plans (including capital and recurrent expenditure), and to support the management authority's administrative structures and processes, and to facilitate coordination and stakeholder collaboration.

A sustainable financing mechanism for PA management should be developed that would include multiple strategies for acquiring funding, including budgetary support, grant funding, Protected Area Conservation Agreements, Fines, and User Fees for extractive and non-extractive use.

In order to ensure the development of mechanisms for the sustainable financing of PAs management, the Government, in collaboration with all relevant stakeholders, shall:

- i. create a Forestry and Protected Areas Fund via enabling legislation to fund management of PAs;
- ii. facilitate revenue collection through application of appropriate user fees, PES schemes, taxes, penalties and charges for offences;
- iii. formulate and implement a system of incentives to promote and support designation and management of private land as a PA, as well as to promote and support the conduct of environmentally-friendly activities on lands surrounding PAs (e.g. eco-friendly agricultural systems, urban forestry, green spaces, greening of residential developments).
- iv. ensure harmonisation of incentives for PAs management with other fiscal policies (e.g. taxation and subsidy schemes);
- v. provide adequate annual budgetary allocations to the Forest and Protected Areas Management Authority;
- vi. encourage/promote the use of the Green Fund to support civil society participation in PAs management;

- vii. provide increased funding for PAs research;
- viii. take advantage of opportunities offered by new global environmental markets (e.g. carbon trading), whenever they are relevant and potentially beneficial to Trinidad and Tobago;
- ix. take advantage of multilateral and bilateral donor grant funding, whenever they are relevant and potentially beneficial to the development and management of PAs in Trinidad and Tobago.

### **9.12 Capacity building:**

In order to facilitate effective participatory management of PAs in Trinidad and Tobago, the Government, in collaboration with all relevant stakeholders, shall:

- i. build the capacities of stakeholders from government, civil society and the private sector including in:
  - a. technical aspects of PA management (including expertise in field research methodology and publication of research, managing cultural and historical resources, and management of natural ecosystems to conserve genetic, species and ecosystem diversity and ecosystem services);
  - b. facilitating and participating in negotiating, establishing, and implementing participatory management arrangements including the development of a shared enabling world view, beliefs, culture and perceptions regarding how PAs should be used and managed; skills such as communication, stakeholder identification and analysis, stakeholder mobilisation, facilitation of participatory processes, conflict management; the material and financial resources to support participation and the enabling structures and relationships;
  - c. acquiring grant funding and develop PES and user fees systems;
  - d. analysing livelihoods benefits and manage sustainable use of PAs, including sustainable extractive use, and non-extractive use for recreation, education and research;
  - e. developing, maintaining and using a system of information to guide PAs management including:
    - i. collecting and maintaining ecological and socio-economic information;
    - ii. developing and utilising Geographic Information System (GIS) technology.
- ii. provide resources to assist NGOs and CBOs to effectively participate in management (which may include provision of technical assistance, financial or material resources, access to and rights to manage lands);

- iii. improve and adapt the skills mix and increase the number of staff in key government agencies at technical and professional levels;
- iv. improve administrative and management efficiency and effectiveness of the key government agencies;
- v. enhance training at the technical, undergraduate and graduate levels (e.g. at the University of the West Indies [UWI] and the University of Trinidad and Tobago [UTT]), which will also address the demand for PA training at the regional level;
- vi. enhance training in participatory protected areas management for government, private sector and civil society stakeholders;
- vii. institutionalise mechanisms for continuing professional education of PAs managers in the public service;
- viii. develop terms and conditions of employment that address the needs of PAs management;
- ix. promote study visits, exchange programmes and short professional workshops and seminars;
- x. develop expertise in negotiating and developing policy instruments to include integration of protected area management needs into land use and physical development plans and national policies.

### **9.13 Research**

In order to facilitate effective research and monitoring to inform decisions regarding management of PAs in Trinidad and Tobago, the Government, in collaboration with all relevant stakeholders, shall:

- i. identify the priority research needs for guiding PAs management;
- ii. facilitate and support the design and implementation of research programmes in PAs;
- iii. promote and support use of the best available technologies (including GIS and remote sensing);
- xi. collect baseline data and conduct continuous and periodic inventories of resources in PAs, using appropriate technology, including GIS, remote sensing, satellite imagery etc.;
- xii. collect ecological data to guide a broad ecosystem approach to PA management, sustainable use and conservation;
- xiii. collect socio-economic data on the links between PAs and livelihoods;
- xiv. conduct an economic valuation of resources in PAs in Trinidad and Tobago for inclusion in national economic accounting;
- xv. use traditional knowledge to inform management;

- xvi. implement a permit system to regulate research in PAs;
- xvii. ensure that raw data from research is shared with the Forest and Protected Areas Management Authority
- xviii. conduct an evaluation of the carrying capacity of each PA

#### **9.14 Knowledge sharing and information management**

In order to facilitate effective information access and exchange, information management, and use of traditional knowledge for management of PAs in Trinidad and Tobago, the Government, in collaboration with all relevant stakeholders, shall:

- i. ensure that data (including remote sensing data) and information on PAs (including management plans, management reports for individual PAs, audited financial statements and annual reports) are shared by and available to government agencies, academic and research institutions; the private sector, NGOs, CBOs, communities, and the public (at the national, regional and international levels);
- ii. ensure that national and local stakeholders have equitable access to and benefits from information and knowledge on and use of PAs, including information and knowledge of foreign stakeholders (including researchers);
- iii. encourage information sharing between scientists, managers and the general public;
- iv. collect and record traditional knowledge on use, management and cultural relationships of people with PAs.

#### **9.15 Livelihood development**

In order to ensure that benefits from PAs are equitably distributed to the people of Trinidad and Tobago, the Government, in collaboration with all relevant stakeholders, shall:

- i. develop community-based programmes to benefit rural stakeholders in management and use of PAs;
- ii. provide technical and financial support for the development of sustainable industries and small businesses based on the sustainable use of natural resources from PAs;
- iii. develop and implement a user fee system, including for payments from beneficiaries of ecosystem services (e.g. water production, landscape beauty, soil conservation) to providers of these services;
- iv. ensure equitable access of the population to goods and services and opportunities from PAs;

- v. develop mechanisms to ensure that the benefits derived from the commercial applications of the countries biological resources by granting access to PAs by foreign and local research are shared with the national community

### **9.16 Education and awareness**

Recognising that awareness and understanding of the economic, social and cultural values (including scientific and recreational values) and intrinsic values of natural and cultural heritage are essential for successful implementation of this National Protected Areas Policy, the Government, in collaboration with all relevant stakeholders, shall:

- i. integrate educational programmes on the resources and values of PAs into all levels of the school curricula;
- ii. partner with tertiary institutions to enhance programmes on PA management;
- iii. develop communication strategies and conduct public awareness programmes and initiatives targeting key audiences (e.g. decision-makers, forest users) utilising a variety of methods and media (including the internet, film and radio).

### **9.17 Regional and international programmes**

Recognising that Trinidad and Tobago has obligations under a number of international agreements, and that these and other international instruments provide opportunities to facilitate and support PAs management in Trinidad and Tobago, the Government, in collaboration with all relevant stakeholders, shall:

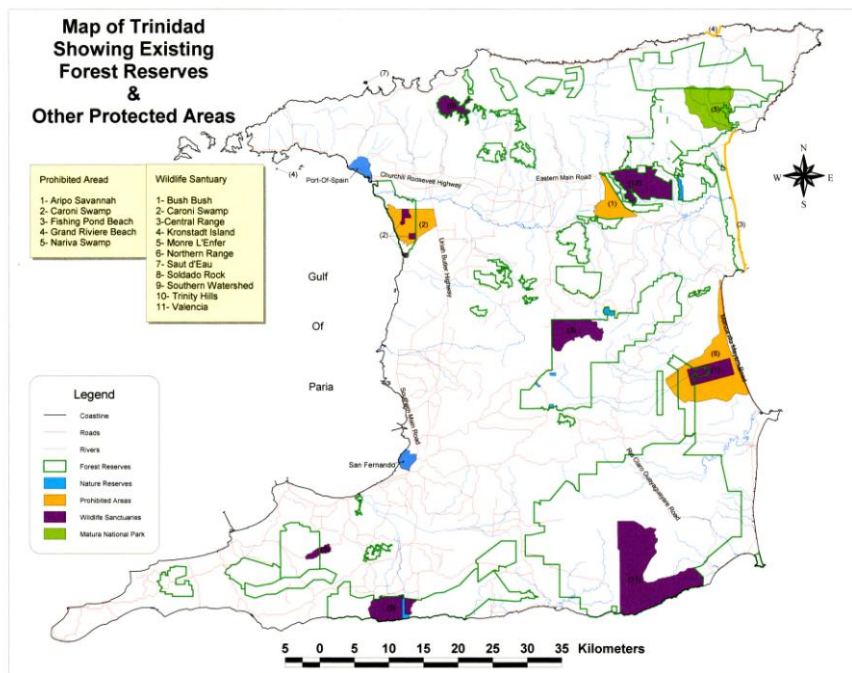
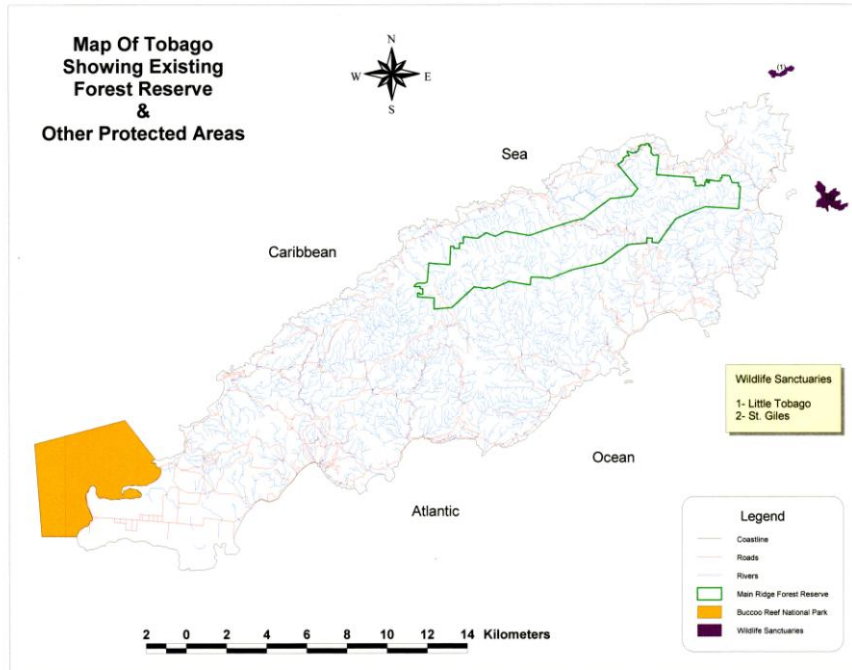
- i. cooperate with regional and international partners and participate in regional and international programmes in the implementation of this National Protected Areas Policy, including participation in and implementation of relevant Multi-lateral Environmental Agreements (e.g. Convention on Biological Diversity, Ramsar Convention, United Nations Convention to Combat Desertification, the Protocol concerning Special Protected Area and Wildlife, World Heritage Convention);
- ii. ensure that areas within Trinidad and Tobago that are designated under treaties to which the State is a party, are protected under national law and managed in accordance with the country's international obligations (e.g. Ramsar Sites, World Heritage Sites, etc);
- iii. develop new enabling laws and regulations to implement obligations under the multilateral agreements to which Trinidad & Tobago is a signatory (e.g. CITES, the Convention on Biological Diversity and the SPAW Protocol, Ramsar Convention).

## **10. Monitoring, evaluating, reporting and review**

Monitoring, evaluation, reporting and review will be integral parts of the policy implementation and management process, in order to ensure that the provisions of the National Protected Areas Policy remain relevant to current and emerging needs, that lessons gained from experience are applied, that changes are made whenever necessary, and that there is full transparency and accountability in that process. In order to achieve this, the Government, in collaboration with all relevant stakeholders, shall:

- i. ensure that monitoring and evaluation (M&E) of implementation of the National Protected Areas Policy is coordinated by the Board of the Forest and Protected Areas Management Authority and involves stakeholders, including through the appointment of committees focusing on specific areas (e.g. sustainable use, biodiversity conservation, livelihood development, research, policy harmonisation) through establishment of performance targets for implementation of this Policy within one year of its adoption;
- ii. ensure that monitoring is based on relevant science when appropriate, continuous and informs adaptive management by the implementing agencies and organisations;
- iii. ensure that participatory evaluation of the implementation of the policy is conducted every two years, using tools such as smaller focus group meetings, interviews, hotlines, and surveys to prepare for an open public forum where progress and results, impacts and outcomes are reviewed;
- iv. conduct a comprehensive review of the National Protected Areas Policy every ten years;
- v. ensure that any minor revisions or adjustments needed are coordinated by the Forest and Protected Areas Management Authority;
- vi. ensure that the results of the review of the National Protected Areas Policy are reported to Cabinet with any recommendations for substantial policy revisions;
- vii. ensure that the review of the implementation of this National Protected Areas Policy is linked to, and integrated into, other national M&E and reporting requirements (e.g. reporting obligations under international conventions) by including representatives of the agencies responsible on the inter-sectoral monitoring and evaluation committee;
- viii. ensure that reports and results from the M&E process are made available to the Public.

# Appendix 1: Existing Protected Areas in Trinidad and Tobago



## **Appendix 2: Key national polices, legislation, and plans**

### Key national policies include:

- National Environmental Policy (2006)
- National Forest Policy
- Draft Quarry Policy (2005)
- National Tourism Policy (2001)
- National Wetlands Policy (2002)
- National Water Resources Management Policy (2005)
- National Action Programme to Combat Land Degradation in Trinidad and Tobago 2006 – 2020 (2006)

### Key laws, subsidiary legislation and regulations include:

- Forests Act, Chapter 66:01 (1915 amended 1922, 1925, 1933, 1955, 1999)
- Forest (Prohibited Areas) Order (2006); amendments made under Chapter 66:01
- Marine Areas (Preservation and Enhancement) Act, Chapter 37:02 (1970 amended 1996)
- Chaguaramas Development Authority Act, Chapter 35:02 (1972)
- Conservation of Wild Life Act, Chapter 67:01 (1958 amended 1963, 1980)
- Fisheries Act, Chapter 67:51 (1916, amended 1966, 1975) (1980, amended)
- Environmental Management Act, Chapter 35:05 (No. 3 of 2000).
  - Environmentally Sensitive Areas Rules (2001)
  - Environmentally Sensitive Species Rules (2001)
  - Certificate for Environmental Clearance Rules, (2001)
- Tobago House of Assembly Act, Chapter 25:03 (1996 amended 2001) No. 40 of 1996
- Three Chains (Tobago) Act, Chapter 57:04 (1865)
- Land Acquisition Act, Chapter 58:01 (1994 amended 2000)

- Town and Country Planning Act, Chapter 35:01 (1960 amended 1974, 1977, 1980, 1985, 1990)
- State Lands (Regularisation of Tenure) Act, Chapter 57:05 (No. 25 of 1998)
- Sawmills Act, Chapter 66:02
- Land Regulations (1917 and amended 1921)
- State Lands Act, Chap. 57:01 (1969)
- National Heritage Trust Act, Chapter 40:53 (2000)
- Territorial Sea Act, Chapter 1:51
- Continental Shelf Act, Chapter 1:52
- Animal (Diseases and Importation) Act, Chapter 67:02
- Fisheries Act, Chapter 67:02
- Archipelagic Waters and Exclusive Zones Act, Chapter 51:06 (No. 24 of 1986)
- Water and Sewerage Act, Chapter 54:40 (1965)

Key plans include:

- System of National Parks and other Protected Areas in Trinidad and Tobago (1980)
- National Biodiversity Strategy and Action Plan (2001)
- National Action Programme to Combat Land Degradation in Trinidad and Tobago 2006-2020, which is an obligation under the United Nations Convention to Combat Desertification (UNCCD)
- Comprehensive Economic Development Plan for Tobago (2006-2010). Tobago, Capital of Paradise: Clean, Green, Safe and Serene (2005)
- North East Tobago Management Plan. Draft Final Report (December 2002)
- Tourism Master Plan (1995)
- Eastern Northern Range Plan (1990)
- The Tropical Forestry Action Plan for Trinidad and Tobago (1992)
- Draft Chaguaramas Development Plan (1988)

## Appendix 3: Key regional and international agreements

### Regional

**The Convention for the Protection and Development of the Marine Environment of the Wider Caribbean:** known as the Cartagena Convention, which includes a Protocol on Specially Protected Areas and Wildlife (SPAW). This aims to protect rare and fragile ecosystems and habitats in order to protect the resident endangered and threatened species.

### International

**The World Heritage Convention:** requires a commitment to ensuring the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage of member states.

**The Convention on Biological Diversity (CBD):** an all-encompassing global treaty requiring signatories to conserve and sustainably use biodiversity and natural resources and to share the benefits arising from such use equitably. Protected areas are one of the main tools used to meet these obligations. It also has programmes of work on Protected Areas, Island biodiversity, Forest biodiversity and Mountain biodiversity.

**The Convention on Wetlands (RAMSAR):** an intergovernmental treaty, which provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. The Convention obliges Parties to declare at least one wetland for inclusion in the Ramsar List of Wetlands of International Importance. The Government of Trinidad and Tobago has designated three RAMSAR sites: Nariva Swamp (1993), Caroni Swamp (2005), and the Buccoo Reef/Bon Accord Reef Complex (2005).

**The United Nations Convention to Combat Desertification (UNCCD)** in those countries experiencing serious drought and/or desertification, particularly in Africa. The Convention aims to promote effective action to mitigate the degradation of land in arid, semi-arid, and dry sub-humid areas caused primarily by human activities and climatic variations and requirements for signatories include the development of national programmes to implement measures for sustainable land management.

The **Mauritius Strategy** for further implementation of the Barbados Programme of Action and for Small Island States (SIDS): These agreements take into account the economic, social and environmental aspects that are the pillars of a holistic and integrated approach to sustainable development of SIDS.

The **United Nations Framework Convention on Climate Change** sets an overall framework for intergovernmental efforts to tackle climate change challenge.

## Appendix 4 – Outline of Selection Criteria for the Different Categories of Protected Areas to be established in Trinidad and Tobago

Definition	Objectives	Selection criteria
<b>1. Scientific Reserve</b>		
<p>Terrestrial, marine or freshwater areas or combinations of these reserved primarily to protect nationally, regionally, or globally outstanding ecosystems, species and/or geo-diversity features that have been formed mostly or entirely by non-human forces and which would be degraded or destroyed if subjected to all but very light human impact</p>	<p>To preserve ecosystems, species and geo-diversity features in a state as undisturbed by recent human activity as possible;</p> <p>To secure examples of the natural environment for scientific studies, environmental monitoring and education, including baseline areas from which all avoidable access is excluded;</p> <p>To minimize disturbance through careful planning and implementation of research and other approved activities;</p> <p>To conserve cultural and spiritual values associated with nature.</p>	<p>Possess a largely complete set of expected native species, in ecologically significant densities or which could be returned to such densities through natural processes or time-limited interventions;</p> <p>Have a full set of expected native ecosystems that are largely intact, with intact ecological processes, or processes capable of being restored with minimal management intervention;</p> <p>Be free of significant direct intervention by modern humans that would compromise the specified conservation objectives for the area, which usually implies limiting access by people and excluding settlement;</p> <p>Not require substantial and on-going intervention to achieve its conservation objectives;</p> <p>Be surrounded, when feasible, by land uses and marine activities that contribute to the achievement of the area's specified conservation objectives;</p> <p>Be suitable as a baseline monitoring site for monitoring the relative impact of human activities;</p> <p>Be managed for relatively</p>

Definition	Objectives	Selection criteria
		<p>low visitation by humans;</p> <p>Be capable of being managed to ensure minimal disturbance.</p>
<b>2. Special Conservation Reserves</b>		
<p>Unmodified or slightly modified terrestrial, marine or freshwater areas or combinations of these reserved primarily to protect the long-term ecological integrity where natural forces and processes predominate.</p>	<p>To protect the long-term ecological integrity of natural areas that are undisturbed by significant human activity, free of modern infrastructure and where natural forces and processes predominate, so that current and future generations have the opportunity to experience such areas.</p> <p>To provide for public access at levels and of a type which will maintain the ecological integrity of the area for present and future generations;</p> <p>To enable indigenous communities to maintain their traditional lifestyle and customs, living at low density and using the available resources in ways compatible with the conservation objectives;</p> <p>To protect the relevant cultural and spiritual values and non-material benefits to indigenous or non-indigenous populations, such as solitude, respect for sacred sites, respect for ancestors etc.;</p> <p>To allow for low-impact minimally invasive educational and scientific research activities, when such activities cannot be conducted outside the Special Conservation Reserve.</p>	<p>Have a high degree of intactness: containing a large percentage of the original extent of the ecosystem, complete or near-complete native faunal and floral assemblages, retaining intact predator-prey systems, and including large mammals.</p> <p>Be large enough to protect biodiversity, maintain ecological processes and ecosystem services, maintain ecological refugia, buffer against the impacts of climate change, and maintain evolutionary processes.</p> <p>Offer outstanding opportunities for solitude, enjoyed once the area has been reached, by simple, quiet and nonintrusive means of travel (i.e., non-motorized or highly regulated motorized access where strictly necessary and consistent with the biological objectives listed above).</p> <p>Be free of inappropriate or excessive human use or presence, which would decrease ecological values and ultimately prevent an area from meeting the biological and cultural criteria listed above.</p>
<b>3. National Park</b>		
<p>Natural or near-natural terrestrial, marine or freshwater areas or combination of these reserved primarily for the protection and</p>	<p>To protect natural biodiversity, its underlying ecological structure and supporting environmental processes, and</p>	<p>Contain representative examples of major natural regions, and biological and environmental features or</p>

Definition	Objectives	Selection criteria
<p>conservation of large-scale ecological processes, and the complement of species and ecosystems characteristic of the area, and which also provides for ecologically and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities.</p>	<p>to promote education and recreation.</p> <p>To perpetuate, in as natural a state as possible, representative examples of genetic resources and unimpaired natural processes, biotic communities, and physiographic regions;</p> <p>To maintain viable and ecologically functional populations and assemblages of native species at densities sufficient to conserve long term ecosystem integrity and resilience;</p> <p>To conserve wide-ranging species, regional ecological processes and migration routes;</p> <p>To enable visitor use for inspirational, educational, cultural and recreational purposes at a level which will not cause significant biological or ecological harm;</p> <p>To take into account the needs of indigenous people and local communities, including subsistence resource use, where this does not adversely affect the primary objective;</p> <p>To contribute to local economies through tourism.</p>	<p>scenery, where native plant and animal species, habitats and geo-diversity sites are of special spiritual, scientific, educational, recreational or tourist significance;</p> <p>Be of sufficient size and ecological quality so as to maintain ecological functions and processes that will allow the native species and communities to persist for the long term with minimal management intervention;</p> <p>Possess biodiversity where the composition, structure and function to a great degree is in a “natural” state or has the potential to be restored to such a state, with relatively low risk of successful invasions by non-native species.</p>
<b>4. Natural Landmarks</b>		
<p>Terrestrial, marine or freshwater areas or combinations of these reserved primarily to protect specific outstanding natural features (including landforms, seamount, submarine caverns, springs, waterfalls, mountains, sea coves geological features such as caves or living features such as an ancient groves or archaeological sites) and their associated biodiversity and habitats.</p>	<p>To protect specific outstanding natural features and their associated biodiversity and habitats.</p> <p>To provide biodiversity protection of landscapes or seascapes that may have otherwise undergone major changes;</p> <p>To protect specific natural</p>	<p>Possess natural geological and geo-morphological features such as waterfalls, cliffs, craters, caves, fossil beds, sand dunes, rock forms, valleys and marine features such as sea mounts or coral formations;</p> <p>Possess culturally-influenced natural features such as cave dwellings and ancient tracks;</p>

Definition	Objectives	Selection criteria
	<p>sites with spiritual and/or cultural values where these also have biodiversity values;</p> <p>To conserve traditional spiritual and cultural values of the site.</p>	<p>Possess natural-cultural sites such as the many forms of sacred natural sites (sacred groves, springs, waterfalls, mountains, sea coves etc.) of importance to one or more faith groups;</p> <p>Possess cultural sites with associated ecology where protection of a cultural site also protects significant and important biodiversity, such as archaeological/ historical sites that are inextricably linked to a natural area.</p>
<b>5. Habitat or Species Management Reserve</b>		
<p>Terrestrial, marine or freshwater areas or combinations of these reserved primarily to protect particular species or habitats and management activities and decisions reflect this priority.</p>	<p>To maintain, conserve and restore species and habitats. To protect vegetation patterns or other biological features;</p> <p>To protect fragments of habitats as components of landscape or seascape-scale conservation strategies;</p> <p>To develop public education and appreciation of the species and/or habitats concerned;</p> <p>To provide a means by which the urban residents may obtain regular contact with nature.</p>	<p>Harbour a particular target species, which will usually be under threat (e.g., one of the last remaining populations of that species);</p> <p>Protection of habitats to maintain or restore habitats, which may often be fragments of ecosystems;</p>
<b>6. Protected landscape/seascape</b>		
<p>Terrestrial, marine or freshwater areas or combinations of these reserved primarily to protect areas where the interaction of people and nature over time has produced an area of distinct character with significant ecological, biological, cultural and scenic value, and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values.</p>	<p>To protect and sustain important landscapes / seascapes and the associated nature conservation and other values created by interactions with humans through traditional management practices.</p> <p>To maintain a balanced interaction of nature and culture through the protection of landscape and/or seascape and associated traditional</p>	<p>Be a landscape and/or coastal seascape of high and/or distinct scenic quality and with significant associated habitats, flora and fauna and associated cultural features;</p> <p>Feature a balanced interaction between people and nature that has endured over time and still has integrity, or where there is reasonable hope of restoring that integrity;</p>

Definition	Objectives	Selection criteria
	<p>management approaches, societies, cultures and spiritual values;</p> <p>To contribute to broad-scale conservation by maintaining species associated with cultural landscapes and/or by providing conservation opportunities in heavily used landscapes;</p> <p>To provide opportunities for enjoyment, well-being and socio-economic activity through recreation and tourism;</p> <p>To provide natural products and environmental services;</p> <p>To provide a framework to underpin active involvement by the community in the management of valued landscapes or seascapes and the natural and cultural heritage that they contain;</p> <p>To encourage the conservation of agro-biodiversity and aquatic biodiversity;</p> <p>To act as models of sustainability so that lessons can be learnt for wider application.</p>	<p>Feature unique or traditional land-use patterns, e.g., as evidenced in sustainable agricultural and forestry systems and human settlements that have evolved in balance with their landscape.</p> <p>The following are <i>desirable</i> characteristics of these sites:</p> <p>Possess opportunities for recreation and tourism consistent with life style and economic activities;</p> <p>Feature unique or traditional social organizations, as evidenced in local customs, livelihoods and beliefs;</p> <p>Are recognised by artists of all kinds and in cultural traditions (now and in the past);</p> <p>Have potential for ecological and/or landscape restoration.</p>
<b>7. Sustainable Use Reserve</b>		
<p>Terrestrial, marine or freshwater areas or combinations of these reserved primarily to conserve ecosystems, habitats and species, together with associated cultural values and traditional uses, through the implementation of natural resource management systems for the regulation of consumptive use of resources.</p>	<p>To protect natural ecosystems health and values, and to enable sustainable use of forest resources, when conservation and sustainable use can be mutually beneficial.</p> <p>To conserve ecosystems and habitats, together with associated cultural values through the use of natural resources management systems</p>	<p>Are generally large, with part of the area in a natural condition. In such areas a proportion is typically under appropriate sustainable natural resource management, and extractive use of living resources is applied in a manner compatible with nature conservation.</p> <p>Emphasize the sustainable use of forest and fisheries resources as a <i>means</i> to</p>

Definition	Objectives	Selection criteria
		<p>achieve nature conservation, together and in synergy with other actions more common to the other categories, such as protection.</p> <p>Have the potential to enable sustainable utilization of fisheries, timber, wildlife, and non-timber forest products use, as their main output. In this regard, candidate sites for such designation should be certified by the responsible management agency as being suitable for application of such sustainable management systems.</p>

## Appendix 5: Glossary

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

**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.

**CONSERVATION BIOLOGY:** is an interdisciplinary subject of analysing and protecting biological diversity including the biological, physical and social sciences, economics in the practice of natural-resource management.

**CULTURAL HERITAGE:** can be defined as those things and places associated with human activity. The definition is very broad, and includes both Indigenous and historic values.

**ECOLOGY:** is the study of the distribution and abundance of life and the interactions between organisms and their environment.

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

**ECOSYSTEM APPROACH:** is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way' and involves taking into consideration the effects of actions on every element of an ecosystem, based on the recognition that all elements of an ecosystem are linked.

**ECOLOGICAL CORRIDOR:** is a route that allows movement of individual species from one area to another.

**ECOLOGICAL PROCESSES:** is a continuous action or series of actions that is influenced by one or more ecosystems.

**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.

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

**GENETIC DIVERSITY:** refers to the total number of genetic characteristics in the genetic makeup of a species.

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

**HABITAT DEGRADATION:** refers to the decline in habitat quality that accompanies non-natural forms of disturbance.

**HABITAT FRAGMENTATION:** is an alteration of the spatial configuration of habitats that involves an external disturbance that alters the large patch so as to create isolated or tenuously connected patches of the original habitat.

**INDIGENOUS PEOPLES:** are ethnic groups who inhabit the geographic region with which they have the earliest historical connection.

**INTRINSIC VALUE:** is generally defined as the inherent worth of something, independent of its value to anyone or anything else.

**INVASIVE ALIEN SPECIES:** is 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.

**NATURAL HERITAGE:** refers to natural features consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the aesthetic or scientific point of view; including areas which constitute the habitat of threatened species of animals and plants

**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 within the jurisdiction of Trinidad and Tobago.

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

**PAYMENTS FOR ECOSYSTEM SERVICES:** are voluntary transactions that are focused on a well-defined ecosystem service or land use and are 'bought' by at least one buyer from a minimum of one ecosystem service provider if – and only if – the environmental service provider secures conditionality.<sup>3</sup>

**PRIVATE LAND:** is land other than State land.

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

**SPECIES DIVERSITY:** Species diversity refers to the number and distribution of species in one location.

**STAKEHOLDERS:** are the individuals, groups and organisations that are involved in, or may be affected by a change in the conditions governing the management and use of a resource, area or sector

---

<sup>3</sup> Adapted from Wunder, Sven (2005). *Payments for environmental services: some nuts and bolts*. Occasional paper No 42. Centre for International Forestry Research, Indonesia.

**STATE LAND:** are lands in Trinidad and Tobago which are not privately owned or held, and over which the State, through the Commissioner of State Lands, exercises the rights conferred upon that office by the State Lands Act

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

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

**TRADITIONAL KNOWLEDGE:** is the knowledge, innovations and practices of indigenous and local communities which were developed from experience gained over the centuries and adapted to the local culture and environment. It tends to be practical in nature; it usually is transmitted orally from generation to generation and is collectively owned. It takes the form of stories, songs, folklore, proverbs, cultural values, beliefs, rituals, community laws, local language, and agricultural practices, including the development of plant species and animal breeds.

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

**WILDLIFE:** includes wild fauna and flora and micro-organisms.