

**INTERIM FIRST NATIONAL REPORT (revised)  
TO THE CONVENTION ON BIOLOGICAL DIVERSITY secretariat**

**Executive Summary**

Trinidad and Tobago ratified its membership to the Convention on Biodiversity (CBD) on August 1st, 1996, which was signed during the “Earth Summit” in Rio de Janeiro on June 1992. To this end Trinidad and Tobago has recognised its obligation as a Party member and submits to the Secretariat a revised Interim First National Report in an attempt to meet the criteria outlined in Article 6 of the Convention. The detailed First National Report will be prepared and submitted on completion of the National Biodiversity Strategy and Action Plan (NBSAP).

The location, size and geological relationship shared with the South American continent are primarily responsible for this country’s high abundance and variety of biological resources. The islands’ population has historically been closely linked to its biological resources, mainly through agriculture, fishing, recreation, tourism and culture. much more emphasis needs to be placed on the use of these natural resources in a sustainable way.

The Environmental Management Authority (EMA), Trinidad and Tobago’s National Focal Point for the Convention on Biological Diversity in collaboration with the Ministry of Agriculture Land and marine Resources (MALMR), prepared the proposal for funding from the Global Environmental Facility (GEF) to formulate its NBSAP. These two agencies will spearhead this process which will involve the participation of the widest range of stakeholders. At present, preparatory work is in progress to commence the NBSAP in the very near future.

**i. Introduction**

1. Trinidad and Tobago are the two main islands of an archipelagic state situated at the southern end of the chain of Caribbean islands known as the Windward Islands. Trinidad lies 32 km from Tobago at its closest point, however, Trinidad lies approximately 13km away from the Venezuelan mainland. Trinidad and Tobago is located between latitudes 100 and 110, 30 minutes north and lying between 600 and 620 west longitude. The two islands have a combined land area of 5126 km<sup>2</sup>. Being an island state Trinidad and Tobago has an Exclusive Economic Zone (EEZ) comprising roughly 75,000 km<sup>2</sup>, approximately 15 times the land area.
2. Typically the climate is that of the tropics, with an annual rainfall range of 1200 to 3500 mm and a mean temperature range of 22- 31 0C. The climate is characterised by distinct wet and dry seasons. Marine conditions are heavily influenced by rainfall, nutrient and large freshwater volume output from the Orinoco River.
3. Both islands lie on the South American Continental Shelf and are directly influenced by the Orinoco and the South Equatorial Current. Separation from the continental mainland occurred in recent geological times, about 11000 years for Tobago and 1500 years for Trinidad. the biota and terrestrial habitats of Trinidad reflect the ecology of equatorial South America unlike the other Windward islands which have ecosystems dominated by island endemic species.
4. The range of terrestrial ecosystems include evergreen seasonal, semi-evergreen seasonal, deciduous seasonal, littoral woodlands, lower montane rainforests, seasonal montane forests, montane rainforests, elfin woodlands, swamp forests (including mangrove woodlands), palm swamps, marshes and savannahs (see the Appendix - “Brief Summary of the biota of Trinidad and Tobago” for the definitions of the ecological communities). These support rich species diversity. Of 2160 species of flowering plants, 110 are endemic, including many palms. There are approximately 420 species of birds, 100 mammals, 55 snakes, 25 amphibians and 85 reptiles.

5. Marine systems include the water masses; mud bottoms; coral reefs and communities; sandy bottoms; rocky shores and mud flats. These support a range of macro and microbiota in the benthos and water column. an estimated 36 species of reef building corals are found mainly in the reefs of Tobago.

#### The importance of Biological Diversity to Trinidad and Tobago

6. Although the review of taxa in Trinidad and Tobago is far from complete, it is well evidenced, due to its small size and location the country has a high species diversity to surface area ratio. the biological resources of the country are of great importance to all sectors of society playing a critical role at both national and local levels. Rural communities depend upon a variety of wild flora and fauna for their existence through hunting, fishing, craft, tour guiding and other nature-based activities. The natural attributes of both Trinidad and Tobago are the foundation for ecotourism.

7. In Trinidad there are a number of features associated with the various forests throughout the island. Mangroves and wetlands are a habitat for waterfowl species like the Scarlet Ibis (*Eudocimus ruber*), which are of great popularity not only with ornithologists but with nature lovers generally. activities such as nature tours to bird sanctuaries and forest trails generate revenue for individuals and communities associated with these features. In Tobago, coral reefs complement the mix of natural attributes. A few communities on the northern and eastern coasts of Trinidad have the extremely unique feature of being nesting sites for marine turtles, particularly the leather back species. In the insular Caribbean, Trinidad is the nesting area most frequented by the species, and the country has been included in international studies on turtle conservation and recovery.

7. Trinidad has five terrestrial species of game animals that have traditionally supported a hunting industry worth hundreds of thousands of dollars annually. Wildlife fauna and flora have also been the source of stock for the pet (particularly tropical fish, reptiles and birds) and horticultural markets. It should be noted that extraction of wild stock for the pet trade is illegal and remains a threat to biological diversity, as does illegal hunting.

#### Historical Perspective

8. Prior to Trinidad and Tobago's ratification of the CBD, environmental management was effected through a number of Governmental ministries and statutory bodies. this type of multisectoral management often resulted in the duplication of efforts, uncertainty regarding resource utilisation, overlap among agencies involved in the management of resources, conflicting legislation in the area of enforcement, penalties, etc, identifiable gaps and legislation of some vintage.

9. The daily management of biological resources falls within the purview of the MALMR, which has various Divisions for specific resources. The Wildlife and the National Parks Sections fall under the Forestry Division. The former regulates hunting, conducts wildlife research and implements the CITES and Ramsar Conventions while the latter oversees all state lands that have been designated as national parks on account of their ecological or socio-historical features. The Fisheries Division implements fishery stock assessment, fishery management, research in fish biology and extension services for fishing communities. Research Division is conducted into crop propagation and animal husbandry. The National Botanical Gardens is managed by the Horticultural Services Division. The Animal Production and Health Services Division is responsible for the daily management of animal production with respect to dairy, poultry and pig farming (amongst others).

10. The mandate of the MALMR, allows the regulation of hunting and fishing; the import/export of plant and animal species; the control/management of pests and the regulation of methods and materials/equipment used for crop cultivation; timbre cultivation and extraction on state lands.

11. In addition to the MALMR one tertiary academic institution and a few research agencies carry out research on biological resources. The University of the West Indies (UWI) has a number of faculties and departments which conduct research into specific biological/agricultural topics and broader ecological studies as a regular feature of under and post graduate programmes. The departments mainly responsible for these efforts are the Faculty of Agriculture and Life Sciences, which incorporate the departments of Zoology and Plant Sciences and the National Herbarium of Trinidad and Tobago. The Institute of Marine Affairs (IMA) has been responsible for marine and coastal zone research and is the main repository of information/data in this particular area.

12. Non Governmental Organisations (NGOs) and Community Based Organisations (CBOs) are also involved in the conservation of biological resources.

#### The Environmental Management Act in relation to the CBD

13. Trinidad and Tobago was one of the 157 countries that signed the CBD in 1992 at the UN Conference on Environment and Development in Brazil of the same year. This was ratified on 1st August 1996, signalling Trinidad and Tobago's intention to conform to the articles of the Convention. the EMA is designated as the National Focal Point to the Convention for Trinidad and Tobago.

14. In response to the need for a singular and integrated approach to management of the environment, the preparation of the Environmental Management Act commenced in 1993 and was passed by Parliament in 1995. The Environmental Management Authority (EMA) was established as the body with the responsibility for co-ordinating and co-operating with other agencies and governmental Ministries to meet the goals and requirements of the Act. The Act essentially provides for the EMA to set environmental standards, regulate activities that impact on the environment, protect vulnerable habitats (and species) and to institutionalise national policy for the environment. the Certificate of Environmental Clearance (CEC) provisions of the Act are intended to regulate specific activities across the country. The system would be based upon the designation of a list of activities requiring clearance before they can be embarked upon.

15. the proposed Environmental Code of the Act, mandates the Authority to consolidate existing legislation and programmes pertaining to the environment. the aim of the Environmental code is to evaluate, modernise and rationalise relevant laws and programmes to provide comprehensive protection and regulatory measures for the environment.

16. the Environmental Management Act allows the EMA to enter into Memorandum of Understanding (MOU) with other governmental agencies/institutions as a means of establishing co-ordination across jurisdictional lines and contributing to provide for the implementation of integrated environmental management programmes. In the context of this Memorandum, the EMA can appoint and authorise Environmental Officers (EO) to assist with effective management of the environment and appoint Inspectors who would be entitled to examine premises to ensure compliance with the standards and regulations of the Act by the occupants.

17. In addition the Act allows the Authority to designate any defined land area or any species of living plant or animal as being "environmentally sensitive". Designation of "environmentally sensitive areas/species" will specify the type and intensity of activities required to sustain or enhance the resource.

## ii. Implementation of the CBD

### Enabling Activities

18. One of the major steps taken by this country in respect of complying with Article 6 of the Convention (measures aimed at conservation/sustainable use of biological resources) was the preparation of the Project Document on the National Biodiversity Strategy and Action Plan (NBSAP) for Trinidad and Tobago. The Project brief and the subsequent Project document were prepared with the aid of UNDP-GEF Consultants. approval of funding from the GEF was obtained in 1997.

19. The proposal for the development of the Trinidad and Tobago NBSAP is based on wide and deep consultations to field the views and concerns of all stakeholders, the use of existing information on biological diversity and to prevent overlap with other programmes. Implementation will be spearheaded by the National Focal Point (the EMA) in collaboration with MALMR. Public awareness/education initiatives will be used to involve the society in the most meaningful way.

### Policy /Plans /Programmes

20. Since signing and ratifying the Convention Trinidad and Tobago has embarked on a number of new activities expected to impact positively on the conservation of biological resources. Among these are:

The formulation of a draft National Environmental Policy (NEP) which is intended as a guide for all the review and evaluation of environmental data for the preparation of two State of the Environment (SOE) reports for Trinidad and Tobago These reports highlighted and prioritised the needs and deficiencies for environmental management in different focal areas

The feasibility study co-ordinated by the MALMR for National Parks and Watershed Management. The primary aims of this project is to enhance and improve the management of watershed areas through the development of legislation and infrastructure for national parks

21. Agencies continue to pursue the formulation of policies for specific areas of focus. Notable among these is the National Wetlands Policy which addresses the needs of wetland conservation and use.

### Public Awareness/outreach

22. Preservation of the environment and conservation of natural resources continues to be widely communicated to the general population through thematic public education/awareness programmes. Such programmes have adopted the use of multimedia and extension services to disseminate relevant information. The aim of these efforts is to promote applicable conservation values and methods to all sectors of the society with a view to improving attitudes and behaviour patterns. lectures to schools, religious and youth groups have been given and short video presentations aired.

23. The State of the Environment (SOE) report, which is published annually by the EMA as part of its Annual report has been used to make available general information on the environment and is widely disseminated across the country. The cover of the second report bears the illustration of a cracid, the Piping Guan (*Pipile pipile*), a species which is considered to be endangered. The use of this subject on the cover of a widely circulated document is to assist with the sensitisation of the public to this biological resource. This effort was initiated by the MALMR in collaboration with RARE and other international bodies. The next SOE is expected to have an emphasis on biological diversity and would be a source document for the NBSAP.

24. Information dissemination and public outreach have also been achieved through corporate organisations and NGOs. Such approaches have yielded effective interaction with communities and programme sponsorship/funding.

#### Other Related Multilateral Environmental Agreements (MEAs)

25. Other conventions (related directly to biological diversity resources) such as CITES and the Ramsar Convention continue to be implemented by agencies like the MALMR. These activities directly relate to and complement those under the CBD. At present, the environmental impact assessment of the Nariva Swamp is being steered by the MALMR with some funding from Ramsar. This assistance was obtained because the Nariva Swamp has been designated a Ramsar site by being listed on the Montreaux Record. This record is a listing of wetlands that have been determined to undergoing ecological changes as a result of man induced alterations. As such the sites listed on the Montreaux record have been prioritised for international (and local level) conservation attention.

#### **iii. the NBSAP for Trinidad and Tobago**

26. The NBSAP is primarily aimed at increasing the knowledge, conservation and sustainable use of biological diversity in Trinidad and Tobago in the context of its socio-economic development. The preparation of the NBSAP will be conducted in through working partnerships with several Ministerial Divisions, Sections, research institutions, NGOs and Community Based Organisations (CBOs) with specific interest and experience in natural resource conservation. This will be based on inputs from the wide cross section of stakeholders through consultations held at various geographic locations. The process will be under the guidance of a multisectoral steering committee.

27. During the past 7 years rural communities have organised themselves into formal groups for the purpose of making a more effective contribution to resource management. In so doing there has been improved co-operation among the state, private enterprise and the rural communities through comanagement of natural resources. This management will no doubt enhance the ownership of the NBSAP by the stakeholders.

## APPENDIX

### Brief summary of Trinidad and Tobago's biota

#### Trinidad & Tobago Forest Types

1) RAINFOREST

- Wet most months of the year; seasonality is slight
- Most tropical forests are mesophytic, neither too wet or too dry

The greater the moisture extremes the fewer the species

2) SEASONAL FORMATIONS

- alternating between wet and dry with variations; seasonality is pronounced

3) DRY EVERGREEN FORMATIONS

4) MONTANE FORMATIONS (evergreen)

5) INTERMEDIATE FORMATIONS (between climatic and edaphic)

B) Edaphic types - the overriding influence, the controlling factor, is soil (moisture and drainage)

6) SWAMP FORMATIONS

7) MARSH FORMATIONS

#### Large plant families

Large families in terms of species numbers in Trinidad and Tobago (approximately 55% of the total number of vascular plants):

Family	Genera	Species
Ferns & allies	66 (51)	310 (214)
Grasses	74	214
Legumes	75	202
Orchids	68	190
Sedges	22	111
'Rubes' (Rubiaceae)	48	97
Melastomes	22	95
Composites	45	86
Euphorbs	27	82

There are approximately 16 first and second class timbre species, 4 of which are exotics.

#### Freshwater fish (approximately 45 species and excluding sea run and peripheral species)

There are 21 families of freshwater fish to be found in Trinidad, in few orders, and of these four are marine families with freshwater representatives. Tobago in contrast only has seven families of which four are marine families with freshwater representatives

## **Marine fish**

Although there have been no recent taxonomic reviews of the marine fish of Trinidad and Tobago, it is possible to project an ichthyofauna of perhaps somewhere between 400 and 500 species in several dozens of orders and families.

## **Amphibia**

Amphibians constitute the smallest group of vertebrates. In Trinidad there are about 30 species in nine families, in a single order, while as may be expected, Tobago has only about one third the number in fewer families. All are of the anuran order, frogs or toads, there being no salamanders or caecilians (legless amphibians). One frog species bears the strong possibility of being endemic (*Phyllodytes auratus* – Golden tree frog).

## **Reptiles (approximately 85 species, including marine turtles)**

There are six families of snakes, and about 40 species to be found in Trinidad. In Tobago there are fewer families and numbers of species. There are five families of lizards and about 25 species in Trinidad and Tobago. They vary considerably in size, habits and distribution. Some are arboreal, a few terrestrial, and a few burrowing. The rest of the reptilian fauna includes the turtles, terrapins and tortoises, and a single crocodylian, the caiman or alligator. Only the tortoise is terrestrial. There are two species of tortoise listed, one native and one introduced, but both are extremely rare in the wild.

## **Birds (approximately 400 species, of which about 250 breed locally )**

The avifauna of Trinidad and Tobago is extremely well documented in the technical and popular literature. Birds constitute the largest groups of vertebrates. Sixty-six families in twenty orders are represented in Trinidad and Tobago. The dominant order, as it is in many other parts of the globe, is the Passeriformes or perching birds, accounting for almost a third of the families represented. A little over 400 species have been recorded in Trinidad. Again, as with other vertebrate groups, there are substantially fewer species in Tobago than in Trinidad. About 170 species have been recorded for Tobago.

Certain general features of the avifauna may be noted. A substantial proportion of the total number of species is resident and breeding but there are also migrants from North America, a few from South America and sea birds typical of the Caribbean biogeographic province, as well as oceanic species. There are also occasional visitors and strays.

## **Mammals (about 95 species including marine mammals)**

The mammals constitute the final vertebrate group of the terrestrial biota and it too is well documented. Nine orders and about 27 families are represented and all are typical of the adjacent mainland and the wider neotropics. There are approximately 100 indigenous species but the bats and rodents predominate. Bats for example account for over half of the mammalian fauna. The rest of the mammalian group includes the marsupials, edentates, a single armadillo, several rodents, primates, a few carnivores, deer and manatee.

## **Other groups**

As noted above the insects and arachnids dominate the terrestrial fauna. Unfortunately, our knowledge of the various groups is very uneven. Orders such as the Coleoptera, (beetles), Lepidoptera (butterflies and moths) and the Diptera (flies) are relatively large, and while much has been recorded there are immense gaps. The single volume on lepidopterans lists 617 species of butterflies. Most of the hesperiidae (doxor butterflies) are however not included, nor are moths, except for the hawk moths. The total number of lepidopterans is therefore likely to be much higher.

Some of the flies, for example mosquitoes and sandflies, are particularly well known, owing to their importance as pests and vectors of disease. Pests are generally better known as an amorphous grouping rather than as members of one or another insect order.

In contrast to the insects, the arachnids are very poorly documented. This group is of course dominated by the spiders, ticks and mites, but includes the scorpions and a few relatives. The rest of the terrestrial invertebrate fauna is poorly documented.